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Los Angeles County Museum of Art
Monograph Series, Number 1

KRISHNA: THE COWHERD KING

by
Pratapaditya Pal

with a technical report by
Ben B. Johnson

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COVER:

Krishna; Los Angeles Krishna Rājamannār
Group, Bronze, Tamilnadu, ca A.D. 1100;
Los Angeles County Museum of Art, Gift
of Mr. and Mrs. Hal B. Wallis

FRONTISPIECE:

Detail of Satyabhāmā;
Los Angeles Rājamannār Group

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Foreword

American museums have been collecting Indian art for more than a half century, yet private collectors of Indian art in this country are few and donors still fewer. The reason for this may be the nature of Indian art which stands in sharp contrast to both the Western humanist tradition and to contemporary Western art. Humanist art is concerned with creative individuality, intellectual content, and aesthetic values; modern art with invention, personal expression, and the exploitation of artistic means: materials, forms, colors, and spatial relations. Indian art, on the contrary, is anonymous, traditional, and of deeply spiritual intent.

Mr. and Mrs. Hal Wallis, the donors of the Rājamannār Group of Chola bronzes, are immersed in the Western humanist tradition, but at the same time they are able to transcend that tradition to perceive the unselfconscious beauty and the spiritual significance of the products of an entirely different view of life. They are preeminent in the performing arts: Mrs. Wallis (Martha Hyer) as an actress, Hal Wallis as the creator of films in which he vivifies the past in order to give significance to the present. They have long shared an interest in European and American art. Yet their individual responses to the Rājamannār Group were immediate and positive. Through their generosity, the bronzes will be able to contribute to the understanding of Indian culture here for as many centuries as they were venerated in India. To the manifold thanks we extend to Mr. and Mrs. Wallis, I should like to add a note of special appreciation to Mrs. Freeman Gates who first told the Wallises of the availability of the bronzes.

This publication of the Rājamannār Group inaugurates a series of monographs on individual works of art or groups of related objects to be published by the Museum. Each will include an art historical text by a member of the curatorial staff and a technical report by members of the Conservation Center. In this manner we hope to make each monograph as authoritative a publication as the present state of our knowledge and research permits and a point of departure for future scholarship.

Kenneth Donahue, *Director*
Los Angeles County Museum of Art

Acknowledgments

Towards the end of 1970 Mr. and Mrs. Hal B. Wallis very generously purchased for the Los Angeles County Museum of Art a spectacular group of four Chola bronzes. Thereby a large gap in the Museum's Indian collection was partially filled. For many years the bronzes formed part of the famous Belmont Collection in Switzerland, and only recently were they made available to the art world. Because of their unique importance, it was decided to publish a monograph so that when the bronzes were exhibited information would be available to the public.

I am particularly indebted to Mr. Kenneth Donahue, the Director of the Museum, for his constant encouragement which led to the publication of this monograph. I should also like to thank Mr. Ben Johnson, the Head Conservator, and Dr. Thomas Cairns, his assistant, for their labor of love in cleaning the bronzes and Mr. Johnson for contributing to this monograph an essay devoted to certain technical aspects. My thanks should also be expressed to Mrs. Jeanne Doyle and Mrs. Joanne Jaffe for their help in matters of publication and editing and to Miss Rochelle Yeker for diligently typing the manuscript many times. Miss Catherine Glynn has kindly read through the manuscript and has helped to clarify many ambiguities.

Finally, I would like to dedicate my essay to the memory of Sir Frank Lee who was Master of Corpus Christi College in Cambridge during my three years there. While we were ruthless adversaries on the croquet lawn, it was his generosity and enthusiasm that in a sense moulded my subsequent career.

Pratapaditya Pal
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Krishna, from the Los Angeles Krishna Rājamannār Group. Bronze. Tamilnadu, ca. A.D. 1100. Los Angeles County Museum of Art, Gift of Mr. and Mrs. Hal B. Wallis

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*“There appears no way to salvation except the lotus-like feet of Kṛṣṇa,
which are adored by Brahmadeva, Śiva and others — Kṛṣṇa, who at the desire
of a devotee assumes a form easy of meditation and whose power is
unthinkable and whose essence cannot be comprehended.”*

Verse VIII from the *Daśaśloki* of Nimbārka
as translated by R. G. Bhandarkar

*“Becoming the Inner ruler of all persons thou hast made creation evolve
from matter.*

Thou hast become a cowherd who loves the cows

.....

Thou art fit to be sought by the universe as suppliant;

Thine form is complex: Who canst know Thy wonderful form?”

“Tirumalisai Ālvār” as translated by K. C. Varadachari
in *Ālvārs of South India*, Bombay, 1966, p. 58

Introduction

This monograph is primarily concerned with a group of four Chola bronzes representing Krishna, his two consorts Rukmini and Satyabhāmā, and his winged attendant mount Garuḍa (Fig. 1). While this group of bronzes will be the focus of the monograph, I will also use this opportunity to discuss their iconography and style in a somewhat wider context. In the following pages I will not only emphasize the unique importance of the group for students of Vaishṇava iconography, but in my endeavour to determine their position in the general chronological sequence of Chola bronzes, I will attempt in addition to bring to light certain basic problems that still remain with us with regard to the dating of Chola bronzes despite a number of monumental books on the subject published in recent years.

Background

I

The period of the Cholas (extending roughly from the mid-ninth to the mid-fourteenth century) must be considered an epoch of unparalleled magnificence and grandeur in the history of India. Although in the north this period witnessed the rise and fall of two mighty empires, that of the Pālas in the east and that of the Pratihāras in central India, neither dynasty, even during the heyday of its power, had as great an impact both culturally and politically as did the Cholas in the eleventh and twelfth centuries.

Sometime around the middle of the ninth century Vijayālaya Chola emerged from obscurity and laid the foundation of the future empire by capturing the city of Tanjore. For the next three centuries Tanjore remained the principal seat of Chola power. It was at Tanjore during the first decade of the eleventh century that the great Rājarāja built the most magnificent of Chola temples, the Br̥hadīśvara, and it was in and around Tanjore that the prolific tradition of Chola bronzes flourished unimpaired for almost three hundred years.

The period was one of remarkable economic prosperity for south India because of active commerce with both east and west Asian countries. The trade with China must, indeed, have been particularly lucrative for the Cholas sent repeated embassies to China, especially in the eleventh century. It was also a result of economic rather than political motivation that Rājendra I sent naval expeditions to Indonesia and reduced the Śailandra monarch of the Śrīvijaya Empire (comprising the Malaysian peninsula and Sumatra) to vassalage. The Indonesian islands were in a geographically advantageous position to control the seaborne trade between the Arab world and China. Sung China imported many of its luxury items, such as manufactured cotton fabrics, spices, ivory and other semi-precious substances, as well as great quantities of perfume, from south India. In exchange the Indians took currency and precious metals, and

this resulted in such an imbalance in the foreign currency situation in China that by the twelfth century the Chinese government had to adopt restrictive measures to restore the balance. A graphic account of the flourishing trade in the seaports of south India under the Cholas was left by the Jewish traveler Benjamin of Tudela (1170).¹

The economic prosperity of the state and of the merchant class was usually the best insurance of stability for the religious community as well as for the artists. Having amassed their fortunes in this world, the merchants were eager to insure a place in heaven. And, the best way to do so was to build a temple or to make a donation to one which already existed.

The wealth of Chola art, and particularly the prolific output of bronzes in the eleventh and twelfth centuries, is indeed a testimony to the material prosperity that the nation enjoyed.

II

The Cholas were primarily devout Śaivas (followers of Śiva) and may even have displayed hostility towards the Vaishṇavas (followers of Viṣṇu). For the most part their benefactions were made to Śaiva temples so that none of the early Vaishṇava temples of the period can match the Śaiva shrines in monumentality or splendor.

Vishṇuism, however, was already well entrenched in south India prior to the Cholas² although there is little evidence to indicate that the cult of Krishna had been absorbed by Vishṇuism.

Srirangam had become a famous site for Vaishṇava pilgrims during the early Chola period, and, already, the mystical element of later Vishṇuism is reflected in the personality of the only female *ālvār* (Vaishṇava saint) Aṇḍal or Godā. She is said to have dreamt that she was wedded to Viṣṇu, and in her hymns she eloquently described her experiences in this mystical marriage. Later, when Krishna and Viṣṇu were totally identified with each other, such mystical elements as are reflected in Aṇḍal's

experiences became the very basis of the union between Krishna and the human soul.

Aṇḍal is only one of the many *ālvārs* who did much to spread the cult of Vishṇuism in the south between the seventh and ninth centuries. Indeed, the Tamil country may be regarded as the very source of the new surge of *bhakti*, or cult of devotion, that swept across the rest of the country in succeeding centuries. This new cult of *bhakti*, in which the devotee not only contemplates the object of his adoration but becomes emotionally involved in a total manner, is fully expanded in the *Bhāgavatapurāṇa*, a text probably redacted in the Tamil country sometime before A.D. 900. The emotional fervor of this new devotionism is best expressed in the following words attributed to Krishna himself:

*Without the bristling of the hair of the body,
without the mind dissolving, without being
inarticulate because of tears of joy, without bhakti,
how can the heart be purified.*³

It was not until the eleventh century, however, that the faith of the Vaishṇavas gained wider acceptance as a result of the efforts of the *ālvār* Rāmānuja (1017-1137). We are told that because the Vaishṇavas were persecuted by the more populous Śaiva community in the Chola Empire, Rāmānuja had to withdraw into Mysore around 1098. There he converted the Hoysāla Prince, Viṭṭhala Deva, to the Vaishṇava faith. He returned to Srirangam in 1122 and actively continued to serve the cause of Vishṇuism until his death. Although Vishṇuism never acquired the same stature in south India as did the cult of Śiva, there is no doubt that the position it does enjoy today is in large measure due to the erudition and devotion of this philosopher-saint. With his philosophical discourses Rāmānuja accomplished for Vishṇuism what the Bengali poet Jayadeva achieved with his





1. Los Angeles
Rājamannār Group:
l-r Rukmiṇī, Krishna,
Satyabhāmā,
Garuḍa

lyrical poetry in north India in the twelfth century. Jayadeva's book of poems, the *Gitāgovinda*, reached the south quickly and influenced considerably both the Vaishṇava movement and the cult of *bhajana* in which communion with the divine is established through devotional hymns.

In general the twelfth century must be regarded as the period when the solid foundation for Viṣṇuism was laid in south India. Rāmānuja was followed by two other great Vaishṇava saints and teachers who founded two new systems of Viṣṇuism. They were Madhva and Nimbārka, both of whom flourished during the twelfth century. Although the systems propounded by these three Vaishṇava thinkers differ from one another on a philosophical level, all of them firmly believed in the cult of *bhakti*, or total devotion to Viṣṇu or to his manifestations. Rāmānuja's system, however, following the Pāñcarātra school of Viṣṇuism, is based upon the supremacy of Viṣṇu, also known as Nārāyaṇa, and in his order there is little or no reference to Krishna, the cowherd hero. In Madhva's system also, although both Rāma and Krishna are adored, the mystical element of the Krishna cult, as expressed in the cowherd boy and his dalliances with young female cowherds, plays an insignificant role. It is in Nimbārka's Viṣṇuism that we find the pre-eminence of Krishna and of his wives and mistresses, particularly Rādhā. That Nimbārka lived for a long time in Brindavan in north India no doubt explains the twist in his particular form of Viṣṇuism.

The twelfth century was, therefore, especially propitious for the cult of Krishna both in the north and south of India. As we shall see later, the Los Angeles bronzes of Krishna Rājamannār probably were created early in the twelfth century and in their inspired quality may reflect this new vigor of Viṣṇuism in the south. However, the earliest existing shrine of Rājamannār is that at Mannargudi in the Tanjore district.⁴ One of the most impressive Vaishṇava shrines in the south, its foundation very likely dates to the time of Parāntaka I in the tenth

century. It is not improbable that the Los Angeles bronzes were cast in or around Mannargudi.

III

The history of bronzes in south India goes back at least to the early centuries of the Christian era, but examples of early bronzes are rare. The Pallavas, the predecessors of the Cholas in the Tamil country, were enlightened patrons of art, and there is evidence to believe that the practice of casting images in metal flourished in this period although scholars are not unanimous regarding the survival of Pallava bronzes.⁵ It must be remembered that it was often customary in India to discard old and used images or to have them melted down so that the metal could be reused. However, it is an admitted fact that the period of the Cholas witnessed an unprecedented outburst of metal casting, and the bronzes of the period reveal not only the remarkable creative talent of the sculptors but also their great technical dexterity.

Indian religions have consistently stressed that in the final analysis the Absolute is without shape or form. Yet, it is impractical to expect an ordinary human being to appreciate such an abstract concept. Because man thinks in terms of concrete symbols, it is necessary to invent images which allow him to feel the god's tangible presence. The Indian theologians, therefore, created a great variety of forms not only because the manifestational possibilities of the Absolute are infinite, but also because a diversity of iconic types would satisfy a greater number of people.

Krishna himself recommends the efficacy of such tangible symbols when he declares in the *Bhāgavatapurāṇa*:

*One should worship me in idols, etc., whenever
and wherever there is faith; I am the soul of all,
stationed in all beings and in the soul . . .
Establishing an image of me, one should make*

*a permanent temple and pleasant flower gardens
to be used for worship, procession and merriment.*⁶

At the same time, however, he sounds the warning that a gift of an image, if not accompanied by selfless devotion, is meaningless. Elsewhere in the *Bhāgavata* he says:

*Even a minute gift offered by those devoted to
me through love becomes an abundance for me,
but an abundance of things offered by one who
is not devoted is not suitable for my satisfaction.*⁷

Usually large images, such as the Los Angeles bronzes (Fig. 1), were placed in a temple rather than in a domestic shrine and were regarded as accessory statues. Generally, the principal image in a temple sanctum is so large that it is virtually immovable. Hence it was necessary to keep a contingent of smaller icons, frequently of the type seen in the main sanctum, for such ceremonies as ritual bathing or religious processions. The Los Angeles bronzes probably once served as processional images in an important Vaishṇava temple. Very often such “proxy” icons, as one scholar has referred to them,⁸ were made of metal; stone would have been too heavy a material and wood too fragile to carry about in processions.

The Los Angeles bronzes are basically made of copper and have acquired their attractive malachite patination as a result of being buried in the ground over a long period of time.⁹ Copper appears to have been the most favored of all metals because of its availability and its technical possibilities. But the *Bhāgavata* also recommends gold, silver, and iron as alternate materials for icons. The texts also specify which material is ideal for which caste, e.g., a brāhmin can donate an image of gold, silver, or copper; a *kshatriya* (ruling class) can dedicate an image of gold or silver; a *vaiśya* (mercantile caste) of silver or copper; a *śūdra* (plebian class) of copper

only; while an iron icon may be donated by anyone.¹⁰ Ultimately, of course, the choice of metal depended upon what the donor could afford.

IV

The Los Angeles bronzes have a high copper content and, like all other Chola bronzes, were cast solidly by the *cire perdue*, or lost wax, process. This is by far the most common process of casting bronzes, and it seems to have been used very widely in other countries as well. For economical reasons larger bronzes were usually hollowcasts. Both methods, however, were known to the Chola sculptors.

In his book on south Indian bronzes, C. Sivaramamurti¹¹ has written at length about the process of bronze casting in south India, both as it is described in the texts and as it is practiced by craftsmen today. Briefly, the method is as follows.

First a wax model of the image was made. The model was then coated with several layers of clay mixed with charred husk, bits of cotton, and salt, and the coatings were allowed to dry. Subsequently the wax was melted away and the hot metal poured into the cast. After the metal image was retrieved from the cast, it was cleaned and the details chased and finished as required. (See technical report.)

Finally, before the bronzes are described, a few words may be added regarding the proportions employed for the images. Theories of proportions played a major role in determining the form of divine images, and the theologians firmly believed that an image with incorrect proportions was not worthy of worship. The proportions specified for the central image of Krishna in the group, and generally applicable to other images of male divinities, are technically of the *daśātāla* variety. This simply means that the basic unit of measurement, or module, is the height of the face from the forehead to the chin (*tāla*), and the total height of the images should be ten *tālas*, or face-lengths. The proportions of the three accessory figures are reduced according to their importance.

Iconography

I

Of all the divinities in the Indian pantheon, Krishna (Fig. 2 and cover) has perhaps the most colorful personality. While to millions he is the supreme deity – to be loved and adored rather than appeased and feared – to the poets and artists of India he has remained a perennial source of inspiration. Although he is the most complex of the divine personalities of the Indian pantheon, he is also the most easily accessible. While his multifarious activities baffle the rational mind, to the faithful he remains the only means of salvation.

In a sense the many faces of Krishna mirror the myriad aspects of the human personality. He is at once the inspired teacher, the crafty politician, the generous prince, the dauntless hero, the passionate lover, and the compassionate savior. More broadly, we encounter two Krishnas in Indian civilization: one of mythology and the other of poetry. It must be emphasized, however, that since in the Indian tradition the sacred and the profane are never totally separated, the Krishna of poetry is as much a divine personality as is the Krishna of mythology. Much of Indian poetry, moreover, has always been inspired by religious themes, and mystical experience has often formed the basis for both religious ecstasy and poetic fancy.

In his divine aspect Krishna is an earthly manifestation of Vishṇu, the god of preservation in the Brāhmanical pantheon. As such he possesses many of Vishṇu's qualities and attributes including Vishṇu's avian mount, the Garuḍa (Fig. 7). It is, however, Krishna's human aspect that has endeared him to the pious Vaishṇavas in India. And, in the group of bronzes under discussion it is essentially as a human being that he is portrayed. Very likely Krishna was actually a local hero who lived around the Mathura area of northern India and was subsequently deified and identified with Vishṇu. His non-Aryan and aboriginal aspect received emphasis not only from his association with cowherds, but also from the many myths



2. *Krishna*;
Los Angeles
Rājamannār Group

3. *Detail*
of Krishna;
Los Angeles
Rājamannār Group



embedded in early Krishnaite literature in which he is portrayed fighting duels with Indra, the supreme god of the Vedic pantheon whose cult he ultimately dislodged in Mathura.¹² Krishna's native and tribal past are also explicitly revealed by his color. As his name — which means black — implies, the human Krishna is always represented as blue-black or dark blue. In contrast, Viṣṇu, as a solar deity of the Vedic-Aryans, is always a white god. While later theologians ingenuously attempted to gloss over this question of color, the fact remains that Krishna's color more than any of his other characteristics gives evidence of his origin.

The aspect of Krishna portrayed so gracefully in this Los Angeles group of Chola bronzes is simultaneously that of a cowherd and that of a royal person. In Tamil Krishna is often characterized as *rājamannār*, which connotes a leader of the people or a king. And, indeed, in this group of bronzes Krishna's pose is decidedly regal: he stands in pronounced *contrapposto* on a lotus pedestal, his left arm bent at the elbow and resting on one of his female companions. His majesty is further emphasized by the elaborate jewels and ornaments adorning his body, while the hair, arranged in an elegant chignon and held together by jeweled clasps, gives the appearance of a tall crown. That the Krishna of this group also manifests attributes associated with *gopālarāja*, or the king of the cowherds, is reflected by the shepherd's crook which he is supposed to hold in his right hand.

It is interesting to note that while the cowherd aspect and the regal aspect may originally have represented two completely different personalities, at some point in the growth of the Krishna legends the two came to be identified. In the *Mahābhārata*, the major portion of which was composed before the time of Christ, Krishna appears primarily as a prince, but in the *Khila Harivaṃśa*, a supplement to the great epic which was probably redacted in the Gupta period (fourth or fifth century), the identities of the prince and the cowherd hero had totally merged.

II

One of the iconographic texts commonly followed in south India is the *Vaikhānasāgama*.¹³ In it is a lengthy set of instructions for the making of a group of images which would correspond almost completely to the Museum's bronzes. The text states that the image of Krishna should be made according to the *daśatāla* measurements. He should be given two hands and should be of a dark complexion. He is to wear a red garment and be adorned with all forms of appropriate jewelry. His hair should be tied and raised above his head in simulation of a tall crown. His right hand should hold a stick (*kriḍāyashṭhi*), and the left arm, bent at the elbow, should be raised to a certain height and point downward.¹⁴

His consort, Rukmiṇī Devī, should be placed on Krishna's right. She should be golden colored with her hair raised in a type of coiffure known as *dhammilla*. Her right arm should hang at her side and the left hold a lotus. Another of Krishna's consorts, Satyabhāmā, should appear on his left. Her appearance is almost identical to that of Rukmiṇī Devī, exceptions being that her complexion should be dark and she should hold a lotus with her right hand. Both should be profusely ornamented, and both may bear crowns (*karaṇḍamukuṭa*) on their heads. Further to the god's left, beyond Satyabhāmā, Krishna's mount, Garuḍa, should stand in an attractive posture with his hands in the gesture of salutation (*añjalimudrā*). The relevant section of the text concludes by stating that in some instances Krishna would hold the conch in his left hand.

A shorter, but somewhat more illuminating description of Krishna occurs in another text known as the *Vishṇutantra*.¹⁵ In this text we are told that Krishna is to stand with his body bent thrice (*tribhaṅga*) along the vertical axis, and Rukmiṇī and Satyabhāmā should be shown with him on the same pedestal. The dark Krishna is to be characterized as a young boy wearing yellow garments. Although Rukmiṇī and Satyabhāmā are described as in other

texts, Krishna's attributes are slightly varied: his right hand is to show the gesture known as *kaṭaka* and to hold the *kṛīḍāyashṭhi* while his left hand should both touch the lady on his left and point downward.

An interesting detail in both textual descriptions is that the stick or staff held in Krishna's right hand is described as both a *kṛīḍāyashṭhi* and a *līlāyashṭhi*. The two words seem to carry the implication of a divine magician's wand. As Gopinath Rao¹⁶ pointed out, the stick or wand is known in Tamil as a *kunil*, and at least in one stone image the object resembles the kind of shepherd's staff that one sees more often in Christian iconography. The staff is, indeed, an attribute appropriate for a cowherd hero, but it also functions as a symbol on a more philosophical plane: *līlā* is the word for caprice or playfulness, and the staff is called *līlāyashṭhi* because the entire universe is considered to be a manifestation of Krishna's whimsy. Krishna is the cosmic magician whose magic wand determines the reality and appearance of the phenomenal world.

A number of slightly variant descriptions which also relate to the Los Angeles group may be found in other texts, but it is especially rewarding to consider the one in the *Vishvakṣena Saṁhitā*, in which the description of Krishna is particularly elaborate.¹⁷ He is said to stand in the posture of *tribhaṅga*, a stance that requires the body to be bent three times along the vertical axis. His right leg should be relatively straight, while the left should be bent at the knee. The head should be turned to the right, the torso to the left, and the hip again to the right. The attribute in the god's right hand is here described simply as a staff or a wand (*yashṭhi*). His left arm is to be entwined with the arm of the goddess on his left. His complexion is to be as dark as black mascara (*kṛishṇāñjana prabham*). The god is to be portrayed as young and handsome. Rukmiṇī and Satyabhāmā are described exactly as in the *Vaikhānasāgama*, but Garuḍa is not included in the *Vishvakṣena Saṁhitā*.

The earliest description of the group occurs in the *Vishṇudharmottarapurāṇa* (ca. sixth century) but

with utmost brevity.¹⁸ Krishna, accompanied by Rukmiṇī and Satyabhāmā, is said to hold the discus, and no other attribute is mentioned. However, the description is a general one and does not relate specifically to Rājāmannār. In all the textual descriptions Rukmiṇī is regarded as the chief queen of Krishna, and therefore she stands on his right just as Lakṣmī stands on Viṣṇu's right.¹⁹ It is also clear that Satyabhāmā is to some degree the favorite wife, and hence she clings to Krishna while Rukmiṇī, as befits a chief queen, stands somewhat aloof and dignified.

III

Rukmiṇī (Figs. 4, 5), the chief queen or wife of Krishna, is said to have been the daughter of King Bhismaka of Vidarbha and a sister of Rukma. The story of her marriage to Krishna is an interesting one. Long ago it was customary in India for princesses to choose their own husbands. In a ceremony known as *svayamvara* a king would invite all eligible princely bachelors from neighboring states, and the princess was allowed the freedom to choose among them. In the case of Rukmiṇī, although the *svayamvara* was held and the princess ostensibly given freedom of choice, she was expected to choose Śiśupāla, the Chedi King and a friend of her brother who disliked Krishna. However, Krishna, who happened to be a Vṛishṇi prince, decided to attend the *svayamvara* along with his older brother Balarāma. The brothers reached the capital of Vidarbha and as they were approaching the court saw Rukmiṇī emerging from a temple of Indra. Krishna became so enamoured of the beautiful Rukmiṇī that the brothers immediately decided to abduct her. Thus, while Balarāma and other Vṛishṇi heroes engaged the companions of Rukmiṇī in a battle, Krishna carried the princess away and married her.

The marriage of Krishna and Rukmiṇī is portrayed in great detail in a charming Pahari painting of the early nineteenth century (Fig. 8) in the collection of



4. *Rear view of
Rukmiṇī;*
Los Angeles
Rājamannār Group

5. *Rukmiṇī;*
Los Angeles
Rājamannār Group

6. *Satyabhāmā*;
Los Angeles
Rājamannār Group





7. *Garuḍa*;
Los Angeles
Rājamannār Group

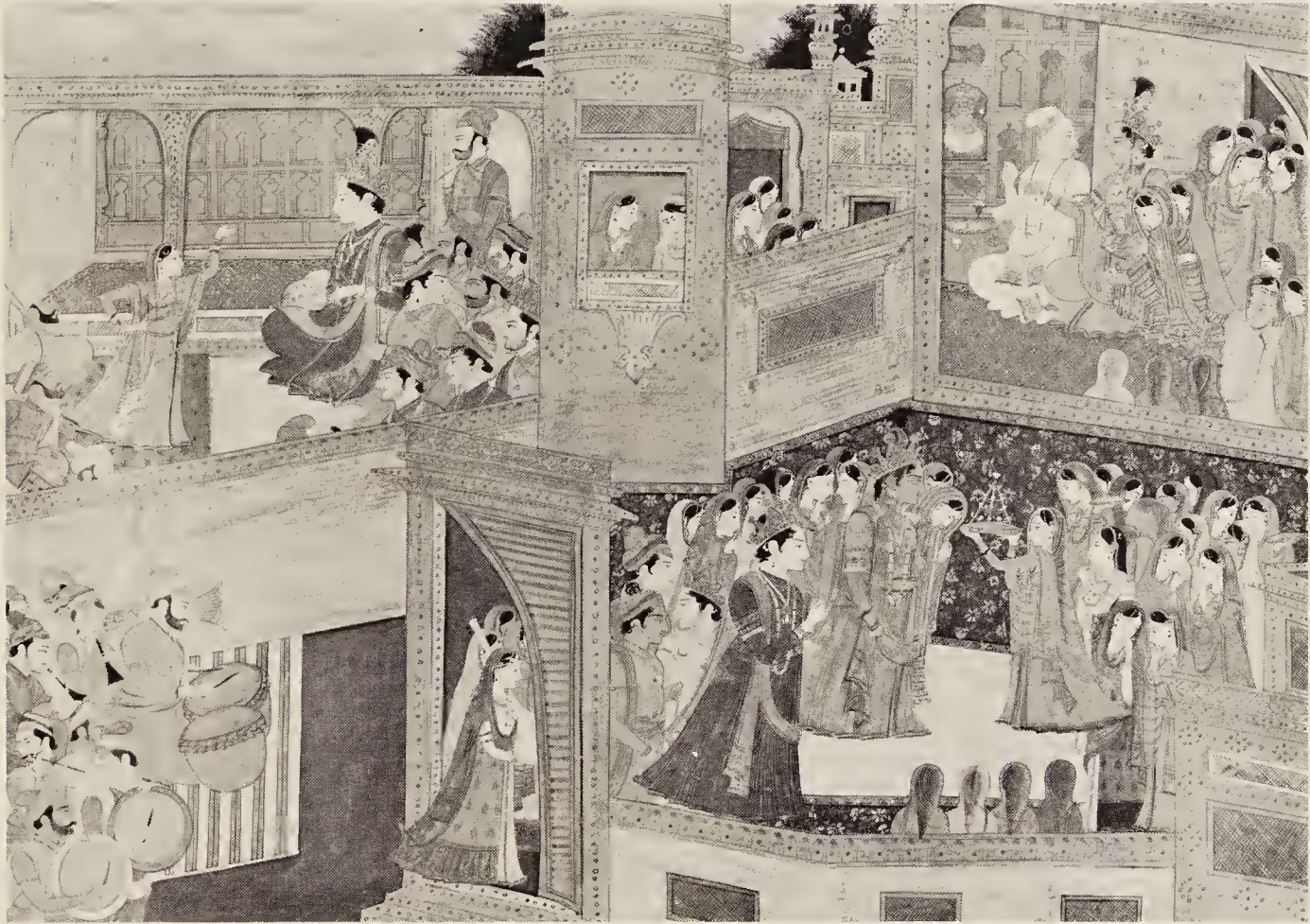
the Los Angeles County Museum of Art. The scene obviously represents Krishna's palace at Dvaraka. In the lower right corner the bride and the groom are being received by ladies of Krishna's household. Immediately above, a priest performs the religious ceremonies, and within the court at the upper left Krishna's brother Balarāma, in the company of other male guests, enjoys a dance performance which forms part of the traditional nuptial festivities.

The story of Krishna's marriage with Satyabhāmā (Fig. 6 and frontispiece) is equally interesting. In Krishna's kingdom at Dvaraka lived two brothers named Prasena and Satrājit. The latter was an ardent worshipper of the Sun god from whom he obtained a beautiful gem called *Śyāmantaka*, which, like the sun, dispels darkness. Upon seeing the magical gem, Krishna coveted it, but there was no honest way of taking it from Satrājit. One day Satrājit's brother Prasena went into the forest to hunt and took the gem with him. In the forest he met a lion who killed Prasena and made away with the gem. But before he could go very far, the beast was confronted by Jāmbavān the king of bears, who in turn killed the lion and took the gem to his cave. In the meantime the story was spread around Dvaraka that Krishna had killed Prasena in order to acquire the gem. Annoyed by this unfair accusation, Krishna set out to find the jewel. Following tracks in the forest, he arrived at the cave of Jāmbavān, killed the bear-king, and returned the gem to Satrājit. The latter was so pleased that he gave Krishna his three daughters in marriage. The most attractive and accomplished of the three was the eldest, Satyabhāmā. Although Krishna had many wives, Rukmiṇī and Satyabhāmā are the two who are always portrayed with him.

After Krishna and Viṣṇu had become identified, the theologians emphasized that Rukmiṇī was really the same person as Śrī-Lakṣmī, Viṣṇu's principal consort and the goddess of beauty and fortune. They also stressed the single identity of Satyabhāmā and Bhū-devī, the earth goddess. According to the *Viṣṇupurāṇa*, just as Viṣṇu is reincarnated

whenever occasion demands, so too does Lakṣmī assume an appropriate form to keep him company.²⁰ Thus when Viṣṇu was reincarnated as Rāma, Lakṣmī was reborn as Sītā, or when he assumed the form of Krishna, she became Rukmiṇī. In the *Harivaṃśa*, although Rukmiṇī is not directly identified with Lakṣmī, in at least one verse she is compared with the goddess.²¹ In a much later text, the *Sadukti-Karṇāmṛita* of Śrīdhara Dāsa, we are told that just as Rukmiṇī selected Krishna to be her husband, so Lakṣmī, after emerging from the ocean, voluntarily chose Viṣṇu as her consort.²² But as we know from earlier myths, Krishna had seized Rukmiṇī, just as Viṣṇu had taken hold of Lakṣmī when she emerged from the ocean.

Although Rukmiṇī has remained the principal wife of Krishna, in later Vaiṣṇava literature and tradition she is relegated to the background, and a new woman appears in the life of Krishna. She is Rādhā, a milkmaid of Brindavan (a neighborhood of Mathura), whose abject surrender to Krishna is said to be symbolic of the human soul's complete surrender to the divine. While Rukmiṇī remains a creation of mythology, Rādhā is essentially a creation of Indian poetry. However, just as Rukmiṇī and Lakṣmī were identified by the theologians, so also were Rukmiṇī and Rādhā. Moreover, their basic similarity is also evident from the fact that Rukmiṇī's dalliance with Krishna is described with as much unabashed sensuality in the *Bhāgavatapurāṇa*, a religious text, as the dalliance between Rādhā and Krishna is described by Jayadeva in his *Gītagovinda*, a poetic work. After Jayadeva, the love of Rādhā and Krishna became virtually the main theme of Indian poetry both in Sanskrit and in the vernacular, particularly in north India. In the early Vaiṣṇava *purāṇas* Rādhā is not mentioned at all, and although in Brindavan Krishna's rapturous and amatory relations with the *gopīs* (cow girls) are given prominence, Rukmiṇī is still his principal wife. Ultimately, as a typical attempt at reconciliation, both Rukmiṇī and Rādhā are accepted as two of Krishna's many wives or consorts,



8. *Marriage of Krishna and Rukmini*, Pahari painting, Guler, ca. 1800; Los Angeles County Museum of Art

and to avoid any conflict of interest Rukmiṇī is made to reside in Dvaraka and Rādhā in Brindavan.²³ In the *Padmapurāṇa* (ch. 17) there is a long list of goddesses who preside over different sites of pilgrimage, and there again Rukmiṇī is said to dwell in Dvaraka and Rādhā in Brindavan. In addition, all of Krishna's wives are said to be manifestations of the Supreme Goddess.

In the final analysis there really is no difference between Lakshmī, Rādhā, and Rukmiṇī, or for that matter Satyabhāmā, and perhaps this is one reason why Indian artists did not distinguish among them in art. Finally, we are told that while in the popular view Rādhā or Rukmiṇī figure prominently among Krishna's several wives, on a philosophical plane they are actually aspects of Krishna himself. They act as Krishna's *śakti* (power or energy) and are created by his desire or divine will. Like the entire universe, they are a manifestation of Krishna's sportiveness or *līlā*.

IV

The fourth figure of the Los Angeles group is Garuḍa (Fig. 7), the celestial bird which served as Viṣṇu's mount. Originally in the *Ṛigveda* (ca. 1500 B.C.), Garuḍa was identified with the sun and was described as a bird with radiant wings (*divyaḥ sa suparṇo Garutman*). It is, therefore, not surprising that he became associated with Viṣṇu who began his career in Vedic mythology as a solar deity. Subsequently, when Viṣṇu and Krishna were identified, he came to serve the latter as well. An interesting story was invented about Garuḍa's origin and how he became associated with Viṣṇu. According to the story, there was an ancient sage named Kāśyapa who had two wives, Vinatā and Kadru. Kadru laid countless eggs from which a great number of serpents were born, but Vinatā produced only three eggs, and for a long time nothing seemed to emerge from them. Impatient, Vinatā broke one of the eggs prematurely, and out shot lightning which

has since remained uncontained and transient in the sky. She waited a little longer and then broke the second egg. This time a boy without feet emerged. He was called Aruṇa, and he became the charioteer of the Sun. In art Aruṇa is always represented without legs. Exasperated, Vinatā allowed the third egg to mature, and in due course the golden winged Garuḍa was born. Meanwhile, annoyed with his mother whose haste in bringing him forth was responsible for his malformed condition, Aruṇa placed a curse on Vinatā, and she was consequently enslaved by Kadru and by Kadru's serpent sons. However, soon after his birth the resplendent Garuḍa avenged his mother by destroying all of the serpents.

Probing the inherent symbolism of this antagonism between the serpent and the bird, Zimmer has pertinently shown how the serpent symbolizes earth and the bird heaven.²⁴ "Heaven and earth, the sovereign spirit and the tenacious, vigorous life-force, are opposed principles, and their opposition is symbolized in the dualism of eagle and snake. The former typifies the immortality of the spiritual principle freed from the bondages of earth, flying into the stainless, translucent ether, to enter a timeless sphere of divine eternal being beyond the stars, while the latter is an animal that is supposed to be particularly tenacious of life."²⁵ Indeed, Zimmer here further expounds upon what the ancient Indian theologians said about Garuḍa's symbolic meaning. In the *Vishṇudharmottarapurāṇa* we are told explicitly that Garuḍa is to be understood as the mind embedded in the bodies of all creatures, for nothing is swifter and stronger than the human mind.²⁶ On the other hand, the body is like the serpent which continuously rejuvenates itself by discarding its skin.

Zimmer has also convincingly shown that this antagonism between the serpent and the bird occurred in one form or another in Mesopotamian mythology which may have traveled westward into Greece and eastward into India. However, it must be stressed that in the Sumerian goblet of Gudea, to

which Zimmer refers,²⁷ the hybrid animal is a griffin, while in India Garuḍa begins his career as a bird. Later, as in this bronze, he was depicted as almost completely human with the exception of his avian face and his wings. The gesture of his hands indicates his devotion to his master, while the use of serpents as his ornaments reflects his victory over them.

Stylistic Analysis

I

Although seen as a group, each of the figures stands on a separate lotus base and is an individual entity. And despite the fact that each figure was probably heavily robed with real, detachable garments and was primarily seen from the front, the back of each is completely modeled and meticulously finished.

Krishna wears a short *dhoti* that fits tightly around his waist and thighs. The garment is of a material richly printed with bold floral designs. The *dhoti* appears to be held by the successive courses of a belt or sash, portions of which overhang the thighs forming pleasing garland-like loops with alternating tassels.

A stylized, grinning head of a lion serves as a clasp for the belt. No doubt this is the familiar "face of glory" (*kīrttimukha*) emblem, which has always been regarded as an auspicious sign. In the arts of the earlier periods, especially in the north, this emblem generally adorned a deity's crown rather than his sash. It is obviously a regal symbol which emphasizes the deity's sovereign aspect. In south India throughout the Chola period the emblem almost invariably appeared on the sashes of male divinities. Although it rarely occurred on the more placid female deities, it seems to have been used frequently to adorn the more terrifying manifestations of the goddess.

Among other accoutrements, Krishna wears the sacred thread which signifies his high caste; the thread falls in ripples diagonally across his torso. In addition, a band (*kaṭibandha*) tied around his waist seems to emphasize the athletic slimness of the figure. His ornaments include three wide layers of necklaces, armlets, bracelets, anklets, and a tiara which adorns his tall chignon, creating the impression of a crown.

In the Los Angeles group the treatment of Krishna's two female companions makes it apparent that the sculptor very deliberately emphasized their physical differences. Just as Rukmiṇī and Satyabhāmā are conceptually identified with

Vishṇu's consorts Lakshmi and Bhū-devī, they also share with them an almost identical iconography. But unlike Lakshmi and Bhū-devī who are usually crowned, Rukmiṇī and Satyabhāmā wear elaborate coiffures on their heads. Satyabhāmā's hair is delineated exactly like Krishna's, but Rukmiṇī's hair style is even more elegant and exotic. Both wear garments which extend to their ankles and cling to their legs so caressingly that the flesh underneath is emphasized. In contrast to the rich, floral-printed material worn by Rukmiṇī—perhaps because she is the chief queen—Satyabhāmā wears a plainer, striped cloth. Moreover, while Satyabhāmā's breasts are free and fully revealed, Rukmiṇī's breasts are bound with a thin piece of cloth known usually as *kucabandha*.

Their physiognomical features and their proportions, like their hair styles and garments, are also quite distinct. Satyabhāmā's body is fuller and heavier than Rukmiṇī's. Her breasts are considerably more prominent, her hips more luxuriant, and her legs seemingly overburdened by an excess of weight. She is closer than Rukmiṇī to the Indian ideal of feminine beauty: ponderous, soft, yet sinuous. On the other hand, Rukmiṇī's physical charms, although equally sensuous and alluring, are somewhat more contained. She is comparatively slim, especially in the hips, and the transition of the waistline into the expanding curves of the hips is less abrupt. By contrast she appears more athletic, and while Satyabhāmā is modeled in terms of volumes and swelling convex planes, Rukmiṇī has much more linear grace. Equally different are the shapes and features of their faces. Rukmiṇī's face is dominated by a prominent nose and springing eyebrows, while Satyabhāmā has a smaller, although sharply delineated, nose and eyebrows that cling to the outline of the eyes. Satyabhāmā is almost an inch and a half taller than Rukmiṇī.

Such a deliberate attempt to differentiate the two female companions is quite unusual in the context of Chola bronzes, and it adds to the interest of this group. Usually when the two wives of Vishṇu are shown, they are treated differently only in terms of

iconography, not in terms of style. Even in the well-known group of sixteenth-century portrait statues of King Krishnadeva-rāya and his queens, the idealized portraits of the two queens are so identical that it is impossible to tell them apart.²⁸ It may be noted, however, that the texts definitely stress the differences between Rukmiṇī and Satyabhāmā in terms of their complexions and hair-styles, so this sculptor may have been more than necessarily inventive in the delineation of their forms.

As a general rule, in any group of images in which a god is shown with his consorts, all of the figures are given very similar facial features. Where there are differences they are so subtle as to be scarcely perceptible. In this group of bronzes, however, Krishna's face is clearly quite different from the others, both in terms of its shape and its features. His face is considerably broader than those of his female companions, and, specifically, his nose is sharper than that of Satyabhāmā but not quite as prominent as that of Rukmiṇī. Although slight, such differences do reflect the artist's individuality and his flair for emphasizing salient details.

Krishna's devoted follower and mount Garuḍa is, with minor exceptions, attired very much like his master. His apparel is of a simpler design, and instead of the jeweled armlets of the divinities, his ornaments are snakes. One snake rears its head from his left thigh, while two others form his earrings. On his head is a multi-tiered crown of the type seen commonly in Chola bronzes of the period.

II

As an iconographic type it is clear that the form of Krishna is derived from the image-type of Vṛishavāhana Śiva (Fig. 9) in which Śiva strikes a similar posture. However, there are important differences such as the cross-legged stance of Śiva and the fact that his right arm is supposed to rest on

9. Śiva Vṛishavāhana
with Pārvatī,
Bronze,
Tiruvengadu,
Tamilnadu,
A.D. 1011;
Tanjore Art
Gallery





10. *Ardhanārīśvara*
Trident, Bronze,
Tamilnadu,
12th century;
Cleveland
Museum of Art,
purchase
from the
J. H. Wade Fund

the head of his bull, Nandi. It may be pointed out that the cross-legged stance of Śiva, indicating his relaxed mood, is a posture frequently used during the early period in images of fertility goddesses. Later, except in Vṛishavāhana images, it became a classic posture for the fluting Krishna. Moreover, in Rājamannār images Krishna's left arm is poised in a manner similar to that of Vṛishavāhana Śiva's right arm. Only when the form of Vṛishavāhana Śiva is combined with that of Pārvatī in an androgynous manner to represent a special variety of Ardhanariśvara is Śiva depicted in a stance other than cross-legged. In such androgynous forms, moreover, Śiva's divinity is emphasized by additional arms. A splendid example, now in the Cleveland Museum (Fig. 10), shows the conjoint figure striking an emphatically flexed posture while Śiva's right hand rests on the head of Nandi. The prongs of Śiva's trident form a magnificent aureole for the two figures, at once enclosing the composition and echoing the sumptuous curves of the figures.

It may bear stressing that normally Vṛishavāhana Śiva and Krishna Rājamannār are shown essentially as human beings rather than as multi-armed divinities. In both image types, moreover, they are accompanied by their consorts, and, whether the mounts are present or not, in both types their love of animals is implicit in the basic concepts.

To further complicate matters, an iconographic form similar to that of the present example is also found among images of Sundaramūrti, a Śaiva saint (Fig. 11). Sundaramūrti of Navalur, a brāhmin who lived in the eighth century, was a friend of the Chera King Cheraman Perumal.²⁹ Because he was a beautiful child, he attracted the attention of the local chieftain Narasinga Munaiyadaraiyan who assumed responsibility for the child's upbringing. When Sundaramūrti was about to wed a brāhmin girl, Śiva mysteriously intervened and claimed him as his slave. Later, when Sundaramūrti fell in love with two women of a lower caste, Śiva once again interceded, this time in order to resolve the women's jealousies. Sundaramūrti subsequently composed

11. *Sundaramūrti*
Nayanār,
Bronze, Kilaiyur,
Tamilnadu,
10th-11th century;
Tajore Art Gallery



many hymns to Śiva, was known as the “friend of God” (*tambiram tolan*), and became the sixty-third Nayanār, or teacher-saint. He was apotheosized after his death like many other ardent Śaiva devotees.

The bronze Sundaramūrti from Kilaiyur, now in the Tanjore Art Gallery, is one of the most striking portrayals of the saint. Were it not for the slightly different placement of the right arm with the hand turned towards the body, and the less emphatic chignon, the image would be indistinguishable from those of Krishna Rājamannār. In later icons of Sundaramūrti even such tenuous differences disappear, and in addition, like Rājamannār, Sundaramūrti is shown with his two wives.³⁰ Why the Śaiva saint and Krishna were so similarly conceived is an unresolved question.

The iconographic type as applied to Śiva Vṛishavāhana or Krishna Rājamannār in Chola images may be traced immediately to Aihole. In one of the niches of the Durgā Temple at Aihole there is a multi-armed Śiva standing in a relaxed posture against his favorite, Nandi (Fig. 12). The placement of his two principal arms corresponds almost exactly to that in the later bronzes although here the left hand rather than the right rests on Nandi’s shoulder. In north India the only known example of the Vṛishavāhana type of image may be seen in a temple at Chamba. There Śiva is shown with four arms.³¹ His left elbow, however, rests on the shoulder of Pārvatī rather than on Nandi as in Rājamannār images. The Rājamannār type appears not to have been represented in north India at all. Receding still further in time we find the earliest representation of the type, in a basic form, on Kushāṇa coins. In the Śiva type of coins of King Vima Kadphises, the god is usually shown standing in a relaxed posture with his left arm resting against the shoulder or hump of his bull and his right hand holding a trident.³² It is this two-armed variety of Śiva reclining against his bull that later was employed with slight modifications to portray Śiva Vṛishavāhana, Krishna Rājamannār, and Sundaramūrti.

Such iconographic transferences appear to have

been a common practice in south India, particularly during the later Chola period. Just as Śiva’s Vṛishavāhana form was slightly altered to portray Krishna Rājamannār, so also the Tripurāntaka form of Śiva images was adapted by the Vaishṇava iconographers to represent Rāmā (Fig. 17), the hero of the epic *Rāmāyaṇa* and one of Viṣṇu’s incarnations. Usually in Tripurāntaka images Śiva has four arms, but the two principal ones are depicted exactly like those of Rāmā who is always shown with two arms only. Here again we notice a strong conceptual relationship between Śiva as Tripurāntaka, the great archer, and Rāmā whose principal weapon is the bow, which he usually holds with his left hand. Similarly, as I have already stressed, both Vṛishavāhana Śiva and Krishna Rājamannār reflect explicitly the two gods’ love of cattle.

III

According to Gopinath Rao, images of Krishna Rājamannār may quite frequently be seen in south Indian temples, but to date no complete group has been published. Of the isolated images which have been published, the finest is unquestionably that in the Sundaraperumal temple in Velapuram (Fig. 13). P. R. Srinivasan has very convincingly established a date of around 1040 for this bronze, and this date may well serve as a guide to the dating of the Los Angeles group.³³

The accurate dating of Chola bronzes is one of the most perplexing problems of Indian art. The sculptural tradition which began early in the tenth century persisted with vigor and remarkable tenacity well into the fourteenth century. Stylistic norms, well established by the end of the tenth century, continued to survive without any perceptible change into the Vijaynagar period (mid-fourteenth century). This makes the task of establishing a firm date for the group under discussion even more difficult.

12. Śiva
Vrīṣhāvāhana,
Stone,
Durgā Temple,
Aihole,
6th century

13. *Kṛṣṇa*
Rājamañār,
Bronze,
Sundaraperumal
Temple,
Velapuram,
Tamilnadu,
ca. A.D. 1050





Let us take, for example, the case of the Sundaraperumal image of Krishna. Primarily because the treatment of the coiffure is very distinctive—with stylized curls arranged in eight horizontal tiers—and yet also occurs in two other bronzes from Radhanarasimhapuram and Semangalam³⁴ Srinivasan concludes that the three bronzes were probably cast by the same sculptor at the same time.

This hypothesis is extremely likely for the feature is indeed rather unusual and appears to be almost a hallmark of the three bronzes. A somewhat variant, and even more elaborate form of the honeycomb pattern may be seen on the head of a charming dancing Krishna from Tirucheherai, assigned by Barrett to the last quarter of the tenth century.³⁵ Srinivasan, however, basing his arguments on many additional details—although not always a reliable art historical method—establishes that the Sundaraperumal Krishna was probably cast toward the end of the reign of Rājendra I, in other words, about A.D. 1040.

In a sense, the first half of the eleventh century in particular and the entire century in general may be said to represent the height of the Chola tradition. The Bṛihadīśvara temple at Tanjore and even the more refined Śiva temple at Gangaikondocholapuram, both built during the first half of the eleventh century, remain unsurpassed in the history of Chola architecture. The disciplined modeling and the consummate grace of the Bṛihadīśvara temple sculptures occur in a still more accomplished fashion in the Vṛishavāhana group discovered at Tiruvengadu and now in the Tanjore Art Gallery. Temple records indicate that the figure of Śiva was consecrated in the year A. D. 1011 and that of his consort in the following year. The Sundaraperumal Krishna is, therefore, only about three decades later.

Yet both in terms of style and quality the differences between the Tiruvengadu Vṛishavāhana and the Krishna are immediately apparent. The more obvious differences are in the shapes of the faces (Krishna's is broad and full, Śiva's more

egg-shaped), in the facial features, and in the hair-styles. Differences in the modeling are more subtle, and, in comparison with the sumptuously ornamented form of Krishna, Śiva's form has a chaste elegance and ascetic simplicity. Yet, it is quite clear that such differences in style, or for that matter in quality, cannot be considered an indication of chronological difference, but rather may reflect expressions of different individual artists or ateliers.

IV

A comparison of the Krishna in the Los Angeles group with that in the temple of Sundaraperumal makes apparent the fact that the differences are mostly in minutiae. The *dhoti* on the Los Angeles Krishna is somewhat longer and drapes the thighs in a symmetrical fashion like a pair of shorts. The *dhoti* in the Sundaraperumal Krishna is draped in the tighter and more angular manner seen more frequently in early Chola bronzes. There are no loops on the *dhoti* of the Sundaraperumal bronze, and the *kīrttimukha* (lion head) clasp of the sash is more substantial than that in the Museum's bronze. The sacred thread across the torso of the Sundaraperumal bronze consists of one string; in the Los Angeles bronze it is made of several courses. Necklaces around the neck of the Museum's Krishna are more elaborate and consist of three layers. In addition there is a peculiar ornamental shoulder loop on the Los Angeles Krishna which does not occur on the Sundaraperumal bronze. The shapes and heights of the coiffures are, of course, different in both, with the head of the Los Angeles figure revealing the more elaborate design. Finally, while the proportions are relatively similar in both images, the faces, although both broad, have distinctive shapes. In general the modeling is very similar in the two bronzes, and this is no doubt due to the fact that the same canons of proportions were employed for both sculptures. The postures of the two Krishnas are identical although the contour of the right

side of the Sundaraperumal figure undulates slightly more than does the corresponding contour of the Museum's bronze. The right foot of the Los Angeles figure allows a prominent broadside view, while in the other it is placed more normally. The delineation of the hands and fingers is somewhat different in the two examples.

Yet, as revealed by the comparison of the Sundaraperumal bronze and the Tiruvengadu Vṛishavāhana Śiva, which are roughly contemporaneous, such differences do not suffice to establish a definitive stylistic sequence; and considered by themselves, the differences between the Sundaraperumal and Los Angeles Krishna figures do not justify a firm conclusion that one was cast earlier than the other. Even assuming that the greater degree of ornamentation in the Los Angeles bronze makes it a later piece, there is virtually no way to establish, in view of the absence of a corpus of dated works, just how much later it might be. The difficulty of conclusively dating the bronze becomes still more evident when it is compared with yet another image of the Rājamannār variety of Krishna in the collection of Lady Cowasji Jahangir in Bombay. Attributed to the twelfth century,³⁶ this bronze is obviously similar to the Los Angeles figure, particularly in terms of the degree of elaboration of the jewelry. A noteworthy iconographic difference is that the Bombay Krishna is given a tall crown of the variety known as *karaṇḍamukuṭa*, an unusual feature for such images. Stylistically, the bronze is comparatively more slender, has a more elongated face, and certainly has a far more emphatic *dehanchement* of the posture, particularly when the figure is viewed from the back. Thus, if a twelfth-century date for this sculpture is acceptable, it is very likely that the Museum's bronze should be dated somewhat earlier. With the Sundaraperumal bronze it shares similar proportions, modeling, and general physiognomy, but it is closer to the Bombay example in the treatment of details and ornamentation.

Thus, if the Sundaraperumal bronze is attributed to the first quarter of the eleventh century and if



14. *Rukmiṇī*, Granite,
South India,
11th century;
Los Angeles
County Museum
of Art, from
the Nasli
and Alice
Heeramaneck
Collection

the Cowasji Jahangir bronze was cast in the middle of the twelfth, a date of about A.D. 1100 would not be unrealistic for the Los Angeles bronze. Indeed, such a date seems to be corroborated by comparisons with a great number of other bronzes which scholars generally attribute to the twelfth century.

V

Additional evidence for an early twelfth-century date for the Los Angeles bronzes emerges when the figure of Rukmiṇī is compared with similar sculptures. Stylistically, the figure is closely related to a stone image of a goddess in the collection of this Museum (Fig. 14); the Boston catalog suggests a twelfth-century date for this sculpture.³⁷ In terms of modeling and salient details the two figures are remarkably alike. In both, the linear quality of the torso is emphasized by a relatively flat abdominal area and narrow hips. The breasts in both sculptures have a similar formation, and both figures are slim and elegant in their proportions. Among the details the most noteworthy in terms of similarity is the hair-style; in both the hair is raised in a bun and held by a garland. In the stone example the end of the hair curls and falls slightly differently behind the left ear, but both have a rather unusual row of ringlets (like curlers) above the temple. Moreover, the manner in which their girdles and sashes are treated in the front is almost identical.

Among the bronzes that are unquestionably related to the Rukmiṇī of the Museum's group, mention may be made of two in the collection of Gautama Sarabhai in Ahmedabad (Fig. 15), one in the collection of Paul E. Manheim in New York (Fig. 16), and a fourth in the collection of John D. Rockefeller 3rd.³⁸ Of these the Manheim piece is reproduced here for the first time.

In all of these bronzes, as well as in the Cleveland Arddhanārīśvara, the drapery is treated in a similar fashion and displays slight variations of the same printed motifs. Such a strong persistence of a similar



15. *Rishipatnī*
(Wife of a Sage),
Bronze,
Tamilnadu, late
11th century;
Collection
of Gautama
Sarabhai,
Ahmedabad



16. *Devī*, Bronze,
Tamilnadu,
12th century;
Collection of
Paul E. Mannheim,
New York

17. *Rāma*, Bronze,
Tamilnadu,
12th century;
Private
Collection,
New York



design would almost certainly indicate that, if not of the same period, the bronzes were probably at least created in the same locality. Although both the Sarabhai bronzes have slightly heavier proportions as well as fuller physiognomical features, the pelvic areas of all the examples have the same smooth, somewhat flat, but sensuous quality. The coiffures in both of the Sarabhai bronzes are more imaginative and elaborate, and the modeling both in these and in the Rockefeller bronze is perhaps slightly more naturalistic than in the Los Angeles Rukmiṇī and the Manheim example.

The Sarabhai bronzes have been attributed by Sivaramamurti to the twelfth century, whereas the Cleveland image and the Rockefeller Devi are dated to the eleventh-twelfth century. Both the Los Angeles and Manheim figures are certainly closer to the Rockefeller bronze in modeling, as well as in the delineation of details. It seems likely that the two Sarabhai bronzes should be dated in the third quarter of the eleventh century because they retain to a great extent the naturalistic intent of the Chola bronzes of the early phase. In contrast the others begin to reflect a tendency toward a certain mannerism which becomes even more apparent at the end of the twelfth century.

Thus, although one hesitates because of methodological limitations to attempt to date sculptures belonging to a conservative tradition which offers so little dated material, all available evidence indicates a likelihood that the Los Angeles bronzes were created around A.D. 1100. And, even when compared with such supremely elegant bronzes as the Tiruvengadu Vṛishavāhana group which was created almost a century earlier, they reveal not only the astonishing tenacity of the Chola tradition, but the continued genius of the Chola sculptors.

Critical Evaluation

Whatever the date of the Los Angeles bronzes, they form a most impressive group. The unknown sculptor could hardly have displayed a better sense of composition or proportion either in the individual figures or in the group as a whole. Together Krishna and Satyabhāmā form a single unit in which a rhythm flows from one figure to the other in uninterrupted harmony. And, despite the spacial separation of Rukmiṇī and Garuḍa from the central pair, the same lyrical rhythm permeates them. Thus, the four figures are held together by a basic pattern of linear movement, and the eye, following their smooth, mellifluous outlines, glides easily from one form to another.

Although each of the principal figures except Garuḍa reflects a standard of beauty that is essentially humanized, following the general Indian practice, the figures conform to a conceptual ideal. There is no attempt to delineate idiosyncratic human musculature; rather, the physical structure is one of unmitigated smoothness with none of the imperfections of a mortal corpus. In the search for ideal physical types for their gods and goddesses, the Indians developed a system of proportions and formal concepts which resemble the human form but simulate shapes that are universal in nature. The fingers, therefore, imitate the form of bean-pods, the eyes the shape of lotus buds, the thighs the shape and smoothness of a tender banana trunk, etc. In a sense, the image is an aggregate of certain ideal shapes rather than modeled from life.

The Los Angeles Krishna is a majestic figure as he stands resting his weight lightly upon the shoulder of Satyabhāmā. Yet, because of his poised and relaxed posture, he appears weightless and buoyant. The sculptor makes no attempt to show tension, physical or psychological, in the personality of any of the figures in the group. They are portrayed in the fullness of their youth, as the texts prescribed, and are, to use an expression of Christopher Fry, "immortal adolescents." The two consorts are paragons of physical loveliness, and, following the Indian ideal of feminine beauty, those areas

symbolic of fertility—the breasts, the expansive hips, and the broad pelvic basin—are given emphasis and are treated as easily comprehensible arcs.

The astonishing feature of Indian sculpture in general and of these bronzes in particular is that, despite their inner spiritual values and a certain geometrical abstraction in their formal characteristics, the figures portrayed remain essentially desirable. One is not only aware of their physical presence, but one is tempted to caress their form and to explore their contours. Indian sculptors seem always to have been cognizant of the fact that one of the principal aesthetic responses of a viewer to a sculpture is tactile. As we see in the Los Angeles bronzes, the form is defined with utmost linear economy, and yet the flow of Rukmiṇī's body (like that of a Botticellian figure) is "like some hieroglyphic delight." Admiring such supremely elegant female forms, it is difficult to believe that they were inspired purely by the arid descriptions of the theologians. It is obvious that the iconographic injunctions merely provided the basic structure beneath the flesh. Rather, if we are to appreciate the forms of Rukmiṇī and Satyabhāmā, we must delve into the rich legacy of the Indian poets. The following is a description of the heavenly enchantress Urvaśī, and such a literary inspiration may well have been the verbal model for the sculptors:

*Shining in her soft, curly, long hair, wherein she
wore many jasmine-flowers, the heart-breaker
went her way. With the moon of her countenance,
and the delight of the movements of its brows,
and the sweetness of the words tripping from her
mouth, with her charm and her soft loveliness,
she seemed to be challenging the moon as
she walked along. As she went along, her breasts,*

*scented with a heavenly salve, black-nippled,
rubbed with heaven's sandalwood, and shining
from her necklace, were shaken up and down.
Through the upborne burden of her breasts, and
the sharp movements of them she was bowed
down at every step, she with the surpassing
splendour of the centre of her body, gloriously
girdled around by the three folds. Below
shimmered, spread out like a mountain, swelling
on high like a hill-side, the place of the temple
of the god of love, ringed by dazzling splendour,
adorned by the girdle's band, tempting with
heart-stirrings even the divine Rishis, the faultless
seat of shame, wrapped in their garb.³⁹*

While the form of Satyabhāmā is somewhat more luxuriant than that of Rukmiṇī, both are invested with a feeling of tranquility that softens the impact of their physical charms. It appears as if the sculptor restrained his impulse at the correct moment, for a further step would have resulted in a suffocating abandonment of the ideal form. Although each female is modeled differently, both reflect the same basic penchant to make concrete by means of elemental shapes and volumes a mysterious inner spirit. There is something calmly satisfying about the basic shapes and the undulating contours of the figures. One can aptly apply Kenneth Clark's words about Ingres' female to these south Indian goddesses and say that here we are confronted with "beauty as something large, simple, and continuous, enclosed and amplified by an unbroken outline."⁴⁰ Indeed, between the concept of form as envisioned by the unknown master of twelfth-

century south India and that of Ingres' approach, there is more than a casual similarity. In both the forms are weighty and yet buoyant, generalized and yet saliently detailed, physically alluring and yet spiritually inspiring.

Irresistibly charming as the principal figures are, certainly the *pièce de résistance* in the group is the figure of Garuḍa. Although he is as dignified as his divine master, he is also the very embodiment of submissiveness and graceful humility. Despite the grotesqueness of his physiognomy, he remains essentially a loveable and approachable figure. His face is almost comical with his large overblown eyes and his symmetrical fangs protruding from a grinning mouth. In fact, he closely resembles the actors who, wearing colorful masks and artificial wings, play him in performances of the Kathakali dance. He is the kind of figure in Kathakali performances which keeps the children awake — in part awed, in part credulous — and the adults amused by the whimsy and fantasy of the make-up and costume. An almost identical response is evoked by this whimsical, but stylishly elegant portrayal of the devoted follower of Krishna. This mythical creature has for millennia stimulated the imagination of artists not only in India, but also in other Asian countries where Indian art penetrated. This outstanding bronze example may be the finest that has thus far come to light in the entire spectrum of south Indian bronzes.

Conclusion

Although the concept of Krishna, the cowherd king, is embedded in ancient Indian mythology, the iconographic form as found in Rājamannār images of south India is very likely a creation of the later *āgama* literature of the Vaishṇavas. The type seems to have captured the imagination of the artists only in the south. The Los Angeles group of bronzes is significant not only because of its iconographic rarity, but also because of its aesthetic appeal as a group or as four individual sculptures. Art-historically, they unequivocally proclaim the continued vigor of the Chola tradition for well over three centuries. At the same time they provide us with yet another opportunity to admire the genius of the unknown masters of Chola India. Such works are as much the result of a sophisticated and alive aesthetic tradition as they are reflective of an individual's intense devotion. After all, the sculptor was not simply creating another work of art, he was attempting to express something about the intangible divine essence. And as the *ālvār* Sathakopa realized: "even the purified (burnished) gold cannot equal the effulgence of Thine divine body."⁴¹

Notes

1. Nilakanta Sastri, *A History of South India* (3rd ed., Madras, 1966), p. 334. "This nation is very trustworthy in matters of trade, and whenever foreign merchants enter their port, three secretaries of the king immediately repair on board their vessels, write down their names and report them to him. The king thereupon grants them security for their property, which they may even leave in the open fields without any guard."
2. For a general account of Vishnuism in south India, see R. G. Bhandarkar, *Vaishnavism, Śaivism and Minor Religious Systems* (Varanasi, 1965).
3. As quoted by T. J. Hopkins in "The Social Teaching of the Bhāgavata Purāṇa," *Krishna: Myths, Rites and Attitudes*, ed. Milton Singer (Chicago and London, 1966), p. 9. This work is generally recommended to those who wish to read further about the cult of Krishna in India.
4. I am indebted to Mr. K. V. Soundararajan for this information. He also informs me that the main image within the shrine at Mannargudi is of a later period.
5. It is of interest to note that among the bronzes attributed by scholars to the Pallava period, by far the largest number represents Vishṇu. For still earlier bronzes from south India, see C. Sivaramamurti, *South Indian Bronzes* (New Delhi, 1963).
6. Hopkins, *op. cit.*, p. 9.
7. *Ibid.*, p. 11.
8. H. Daniel Smith, and K. K. Venkatachari, *A Sourcebook of Vaiṣṇava Iconography* (Madras, 1969), p. 5.

9. Very likely the sculptures were buried in the ground to prevent their destruction during a Muslim invasion.
 10. *suvarṇam rajatam tāmram brāhmaṇānām viśeshataḥ/*
suvarṇam rajatam caiva kshatriyasya viśeshataḥ//
rajatam cāpi tāmram ca vaiśyasya ca viśeshataḥ/
tāmrameva tu śūdrānām sarveshām tāmrameva vā//
lohaajāḥ pratimāḥ sarvā nirdoshassamudāhṛitāḥ/
From the *Vāsishṭhasamhitā* as quoted in Smith and Venkatachari, op. cit., p. 46.
 11. Sivaramamurti, op. cit., pp. 14-17.
 12. At least two incidents from the life of Krishna, as preserved in the *puraṇās*, reflect this hostility between the cult of Krishna and that of Indra. In one of these incidents Krishna, urged by Satyabhāmā, fights with Indra and uproots the *pārijāta* tree from Indra's garden. In a second confrontation, when Krishna forbids the cowherds of Brindavan from performing the annual festival in honor of Indra, the latter lets loose his hordes of menacing clouds to inundate Brindavan, but Krishna raises the mount Govardhana under which the cowherds and the cattle find shelter.
 13. See Appendix
 14. In the description of the left arm of Krishna, the *Vaikhānaśāgama* specifically states that the left arm should be raised to the level of the *hikkāśutra* with the hand pointing downward. Otherwise its delineation should be like that of Rāma (Fig. 17).
 15. See Appendix
 16. Gopinath Rao, *Elements of Hindu Iconography*, I, pt. 1 (Madras, 1914), p. 205 and pl. LVIII.
 17. See Appendix
 18. *Kṛishṇaścakradharaḥ kāryo nīlotpaladalacchaviḥ/*
indīvarakarā kāryā tathā śyāmā ca rukmiṇī //74
tārkschyasthā sā ca kartavyā satyabhāmā surūpiṇī/
anyāśca devyaḥ
kartavyāssurūpassumanoharāḥ//75
Part III, Ch.85
 19. Usually when a god and his consort stand together, the wife is placed on the left (*vāmā*), which is why the word *vāmā* is used as a synonym for a woman. In south India when Viṣṇu is represented with two wives, generally Lakshmī stands on his right and Bhū-devī on his left. This is also the common practice in eastern India when Lakshmī and Sarasvatī are shown flanking Viṣṇu.
 20. *evam yathā jagatsvāmī devadevo janārddanaḥ/*
avatāram karotyeshā tathā śrīstatsahāyini//140
punaśca padmādudbhūtā ādityo 'bhūdyadā

- Hariḥ/
yadā tu bhārgavo rāmastadabhūddharaṇī
tviyam// 141
rāghavatve 'bhavat sītā rukmiṇī
kṛishṇajanmani/
anyeshu cāvatāreshu vishṇoreshā sahāyini// 142
Vishṇupurāṇa, Part I, Ch. 9.
21. S. B. Dasgupta, *Śrīrādhār Kramavikāś* (in Bengali), 3rd ed., 1370 B.S., p. 83. An excellent book for the evolution of the concept of Rādhā in Indian literature.
22. *Loc. cit.*
23. rukmiṇī dvārāvatyām tu rādhā bṛindāvane
vane/ 13, 38
24. H. Zimmer, *The Art of Indian Asia*, I (New York, 1964), pp. 48ff.
25. *ibid.*, p. 51.
26. manastu garuḍo jñeyaḥ sarvvabhūtaśarīragam/
tasmācchīghrataram nāsti tathaiva
balavattaram// 7111, 47, 7
27. Zimmer, *op. cit.*, p. 50.
28. P. R. Srinivasan, *Bronzes of South India* (Bulletin of the Madras Government Museum, Madras, 1963), Fig. 278.
29. Sastri, *op. cit.*, p. 425.
30. Srinivasan, *op. cit.*, Figs. 312, 329, 333.
31. H. Goetz, *Studies in the History and Art of Kashmir and the Indian Himalaya* (Wiesbaden, 1969), pl. XXX.
32. J. M. Rosenfield, *The Dynastic Arts of the Kushanas* (Berkeley and Los Angeles, 1967), pl. II, nos. 19, 20, 23, 24. Also see Fig. 84 for what may be the earliest representation in stone of Vṛishavāhana Śiva.
33. Srinivasan, *op. cit.*, Figs. 173-74 and pp. 267-268.
34. *Ibid.*, Figs. 156, 160-61.
35. D. Barrett, *Early Chola Bronzes* (Bombay, 1965), Figs. 95, 96.
36. K. Khandalawala and M. Chandra, *Miniatures and Sculptures, from the Collection of the late Sir Cowasji Jahangir, Bart* (Bombay, 1965), Figs. 125, 126.
37. *The Arts of India and Nepal: The Nasli and Alice Heeramaneeck Collection* (Boston, 1966), p. 59. In the Boston catalog the figure has been identified as Pārvatī. However, it would appear that as part of a larger group she would have stood on the god's right. She would then have to represent either Lakshmi, consort of Vishṇu, or Rukmiṇī, the wife of Krishṇa. Usually Lakshmi is given a crown (*karaṇḍamukuṭa*) whereas this lady has the *dhammīla* type of hair typical of Rukmiṇī.
38. Sivaramamurti, *op. cit.*, Figs. 66a and b, 81b, and also *Master Bronzes of India* (Chicago, 1965), Fig. 39. The Gautama Sarabhai bronze (Fig. 15) has been identified by Mr. Sivaramamurti

as Annapūrṇā. More likely, as suggested by Mr. Srinivasan, it represents one of the *ṛishipatnīs* and formed part of a Bhikshāṭana group. Annapūrṇā should carry a pot in her left hand in addition to the spoon.

39. J. J. Meyer, *Sexual Life in Ancient India*, II (London, 1930), pp. 335-336.
40. Kenneth Clark, *The Nude* (Harmondsworth, 1960), p. 144. It is interesting to note Ingres' comment about the human body, as quoted by Clark (p. 147): "One must not dwell too much on the details of the human body, the members must be, so to speak, like shafts of columns: such they are in the greatest masters." The words could well have been written by an aesthete in ancient India. Although Ingres' nudes are far more detailed than south Indian females, nonetheless in many of his works, such as the *Venus Anadyomene* or *La Grande Odalisque*, there is the same insistence upon oriental opulence being both restrained and asserted by fluid linearism.
41. K. C. Varadachari, *Ālvārs of South India* (Bombay, 1966), p. 186.

Appendix

The following Sanskrit excerpts from relevant iconographic texts relate directly to the bronzes that form the central theme of this monograph.

Vaikhānasāgama

*kṛṣṇasya lakṣmaṇaṁ vakṣye/ madhamam
daśatālamitiṁ savimśatisatāṅgulaṁ dvibhujam
śyāmābhām raktavastradharam sarvābharaṇabhuṣi-
taṁ kirīṭinamudbaddhakuntalaṁ vā dakṣiṇena
hastena kṛḍāyaṣṭidharam vāmodyat kara karpūra
hikkā sūtrā dadhastādathordhva karamanyatsarvaṁ
rāghavasyokta mārgeṇa/ dakṣiṇe rukmiṇī devīm
hemābhyā dhammilla kuntala yutāmudbaddha
kuntalām vā prasārita-dakṣiṇa-hastām sapadmavā-
mahastām tathā vāmapārśve satyabhāmām
śyāmābhām śīroruhavandha-dhammilla-yuta-
mudbaddhakuntalayutām vā sotpala dakṣiṇahastām
prasārita vāma hastām sarvābharaṇasaṁyuktām
kārayet/ devībhyām karaṇḍīkamakuṭam veti
kecit/ devasya vāmapārśve garuḍam prāñjaliṁ kṛtya
susthitam karayet/ devasya dakṣiṇahastam līlā
yaṣṭi yutam vāmaṁ saśaṅkham vā kārayet/*

The two following extracts are quoted from
A Source Book of Vaiṣṇava Iconography
by H. Daniel Smith and K. K. A. Venkatachari
(Madras, 1969), pp. 157-158.

Viṣṇu Tantra XVIII: 2-7

Kṛṣṇasya sthāpanam kuryāt tribhaṅgyā tu

samanvitam/
 samantamekapīṭhe tu rukmiṇīsatyabhāmāyoh//
 kṛṣṇam ca bālavapuṣam śyāmalaṁ pītavasasam//
 rukmiṇī kanakābhā syātsatyabhāmā ca śyāmālā//
 vāsudevaṁ guḍākeśam sarvābharaṇabhūṣitam/
 kṛīḍāyaṣṭiyutam devaṁ tribhaṅgasthitisaṁyutam//
 dakṣiṇe kaṭakam haste yaṣṭyādhārasamanvitam/
 vāmadevyā bhuje saktam
 vāmahastamadhomukham//
 vāmaṁ karatale kṛtvā nābhīsūtram tu kārayet/
 dakṣiṇam yaṣṭihastam tu vastramātre tu yojayet//
 āsīnam yānakam vāpi kṛṣṇabimbam tu padmaja/
 kārayetkaṭakādyaistu dvibhujam vā caturbhujam//

Viṣvaksena saṁhitā XI: 114b-129a

ataḥ paraṁ pravakṣyāmi kṛṣṇam
 kṛṣṇāñjanaprabham//
 sthāpanam kāryamasyaiva sthānakam tu viśeṣataḥ/
 tribhaṅgayā sammitam tam tu sthitam pīṭhe
 mahāmune//
 kṛīḍāyaṣṭisamāyuktam devyou ca paramaṁ harim/
 sthāpayeddevike sthāne sarvajñaṁ sarvakāraṇam//
 evaṁ saṁkṣepataḥ proktoṁ viviktenādhunā mune/
 ataśśyāmanibham vāpi pītāmbarasamanvitam//
 vāsudevaṁ guḍākeśam sarvābharaṇabhūṣitam/

kṛīḍāyaṣṭidharaṁ devaṁ
 tribhaṅgasthitisaṁyutam//
 susthitam dakṣiṇam pādāṁ vāmapādāṁ tu
 kuñcitam/
 vāmapādataṁ tiryak krameṇaiva tu kārayet//
 tatkaṇiṣṭhāṅgulisthāne cānguṣṭhasthitimācayet/
 kiñcitkuñcitajānuśca vāmapādasthitirbhavet//
 vaktram caiva tathā gātre kaṭīyante tathaiva ca/
 triṣu mārgeṣu bhaṅgitvāt tribhaṅgitvaṁ vidhīyate//
 vaktram dakṣinato bhaṅge madhyakāyaṁ tu
 vāmataḥ/
 kaṭidakṣinato bhāge bhaṅgatrayamudāhṛtam//
 kārayeddakṣiṇam hastam suyaṣṭim kaṭakānvitam/
 vāmaṁ devibhujāsaktam
 vāmahastamadhomukham//
 vāmaṁ karataṁ caiva nābhīsutreṇa yojayet/
 dakṣiṇam kaṭihastam tu vakrasūtreṇa yojayet//
 tribhāgamānamāyāmaṁ mukhaṁ murdhni
 trigokalam/
 hanugrīvaṁ trimātrārdhamardhamātrāṅgulaṁ
 smṛtam//
 hikkānābhimukhe caiva madhyakāyaṁ
 pratiṣṭhitam/
 meḍhram nābhimukhaṁ nābheḥ
 tasmādūrūmukhadvayam//

*mānaniṁ samīkṣepataḥ proktaṁ śeṣaṁ sādhanāraṇaṁ
smṛtaṁ/
devyou tatpārsvayoścaiva sthāpayetkramayogataḥ//
devasya dakṣiṇe kuryādrukmiṇīṁ
rukmasannibhām/
satyabhāmā caḥ vāme tu kārayet śyāmasannibhām//
purvavat kamalam gṛhya sātṭvikena samāvṛte/*

All three texts, therefore, agree in their description of Krishna. It is particularly stressed that his right hand should display the gesture known as *kaṭaka* as it holds the *kṛīḍāyaṣṭi*, or the shepherd's crook. As to the disposition of the left arm, while the *Vaikhānasāgama* only describes its position, the other two texts clearly prescribe that it should rest on the goddess' shoulder or upper arm with the hand pointing down. According to an alternate convention, as preserved in the *Vaikhānasāgama*, Krishna's left hand may hold a conch. It is of interest that only the *Vaikhānasāgama* enjoins that Garuḍa should be the fourth figure in the group. At any rate, all three texts belong to the Pāñcarātra sect of Viṣṇuism, indicating thereby the particular sectarian affiliation of such images of Krishna, the Cowherd King.

Krishna Rājamannār Bronzes: An Examination and Treatment Report*

by

Ben B. Johnson

The technical aspects of Indian bronzes have not been studied with the same intensity as those of Chinese or classical Western bronzes even though the technical proficiency of Indian sculptors indicates a sophisticated knowledge of foundry and metal-working techniques. Indeed, initial studies of Gupta metal sculpture and isolated examples of later pieces indicate undiscovered accomplishments which may well rival some of the finer examples of Chinese technology. My examination and brief observations on casting and decorating techniques are included with Dr. Pal's analysis of historical and religious aspects of the group in the hope that they will enhance the understanding and appreciation of the bronzes.

Although the bronze group was sent to the Laboratory primarily for cleaning, its presence provided an excellent opportunity to study the pieces technically for metal composition, casting, and decorating techniques.

SURFACE EXAMINATION

During the stereomicroscopic examination (5-40x) of the group, it became apparent that the surfaces, which had beautiful, rich green patinas, were covered with a layer of soil and accretion which had been on the pieces since excavation (Fig. 18). The thickness of the accretion layer varied up to as much as 3 mm. and generally obliterated much of the surface texture and design. It consisted of impacted clayey soil with some resinous inclusions.¹ Aesthetically, the accretion layer distracted from an important surface feature, a beautiful jade-like color.

**I am indebted to Dr. Samuel Eilenberg for making an extended loan of the south Indian study piece, and also to Dr. Gunter Gigas of Atomics International, North American Rockwell for taking neutron radiographs, and to John Gebhart, Conservation Photographer, who worked so diligently and patiently to obtain the detailed technical photographs. I wish to thank my staff for their cooperation in the cleaning and study of these bronzes.*

CASTING TECHNIQUE

We are fortunate to have on loan a related south Indian bronze of Bāla-Krishna (belonging to Samuel Eilenberg) which was discarded after casting (Fig. 19). This is a valuable study piece which can be compared advantageously to our bronze group as it is closely related stylistically and as chemical analysis of its major, minor, and trace elements tally very closely with that of the Los Angeles group.²

The piece was discarded because of a miscast; the mold was not completely filled with the molten metal. The fact that there is very little coldworking of the surface enables the study of the forms almost as they would have appeared in the original model. There are no surface clues as to the material used to make the original model, but it certainly was a plastic substance such as wax or clay rather than wood. This piece, as well as the Los Angeles bronzes, are solid cast.³ It is clear, however, that a multipiece mold was used in the castings as a mold mark is visible below the chin of the Eilenberg piece (Fig. 20) and on the right hip of Rukmiṇī (Fig. 21). The lack of details on the piece indicates that almost all the surface enrichment as well as further definition of forms, note particularly the face, was to be achieved through coldworking.⁴ This is also evident from a study of the surface of the Los Angeles group in which almost all surface enrichment is achieved with a chisel.

The casting position and sprue-vent system can be determined from the Eilenberg piece. Since the buttocks and the back of the calves, heels, and base were not filled by the molten metal during casting, the horizontal line created by the level of the liquid metal can be used to position the piece precisely as it was when cast (Fig. 22).

The main sprue entered at the back of the head and a second sprue was positioned in the center of the back (Fig. 23). Both were probably connected to a single pouring cup. The depression in the sprue, especially noticeable in the one behind the head, is caused by the shrinkage of metal on

cooling.⁵ The upper sprue was intentionally left to serve as an attachment bolt for the nimbus (*śīrascakra*). Smaller sprues can be seen linking elbows and hands to insure proper filling of the mold in these lower areas. Vents were probably located on the lower rear part of the figure, in areas of the mold which were not filled completely. This would have been sensible since the largest volume in the mold was lower and first received the molten metal, thus forcing escaping gases to this upper area.

CHASING AND SURFACE ENRICHMENT

The study piece also gives some indication of the initial steps in chasing the surface. The lower left leg and the left arm show what appear to be filing marks in such a broad way as to suggest a reworking of the entire form with a file. Krishna from our group shows similar markings (Fig. 24). Generally, it is quite difficult to determine where sprues were located from surface examination of a carefully finished piece. This is the case with the Los Angeles group which is so carefully finished that marks from sprues and vents cannot be detected. Many other marks, however, attest to the variety of tools — such as chisels, files, and punches — employed in finishing the surfaces of the pieces (Fig. 25). A comparison of the left bicep ornament in the Eilenberg piece to a corresponding area on Satyabhāmā gives an idea of how the metal surface might have appeared before and after detailed coldworking (Figs. 26, 27).

JOINING TECHNIQUES

Joining techniques detectable on the Los Angeles group are “peening” and a combination of “peening” and “force fitting.” The pieces were cast with a small, flat, and more or less oval base similar to that of the study piece. This base was then rested on lugs (Fig. 28) in a larger, bell-shaped, two part base with a flange. The flange was pounded over the upper base to hold it in place (Fig. 29).



18.
Detail of Krishna
(macrophotograph
10X magnification)
showing accretion
of clayey
soil and
resinous crystals;
Los Angeles
Rājamannār Group



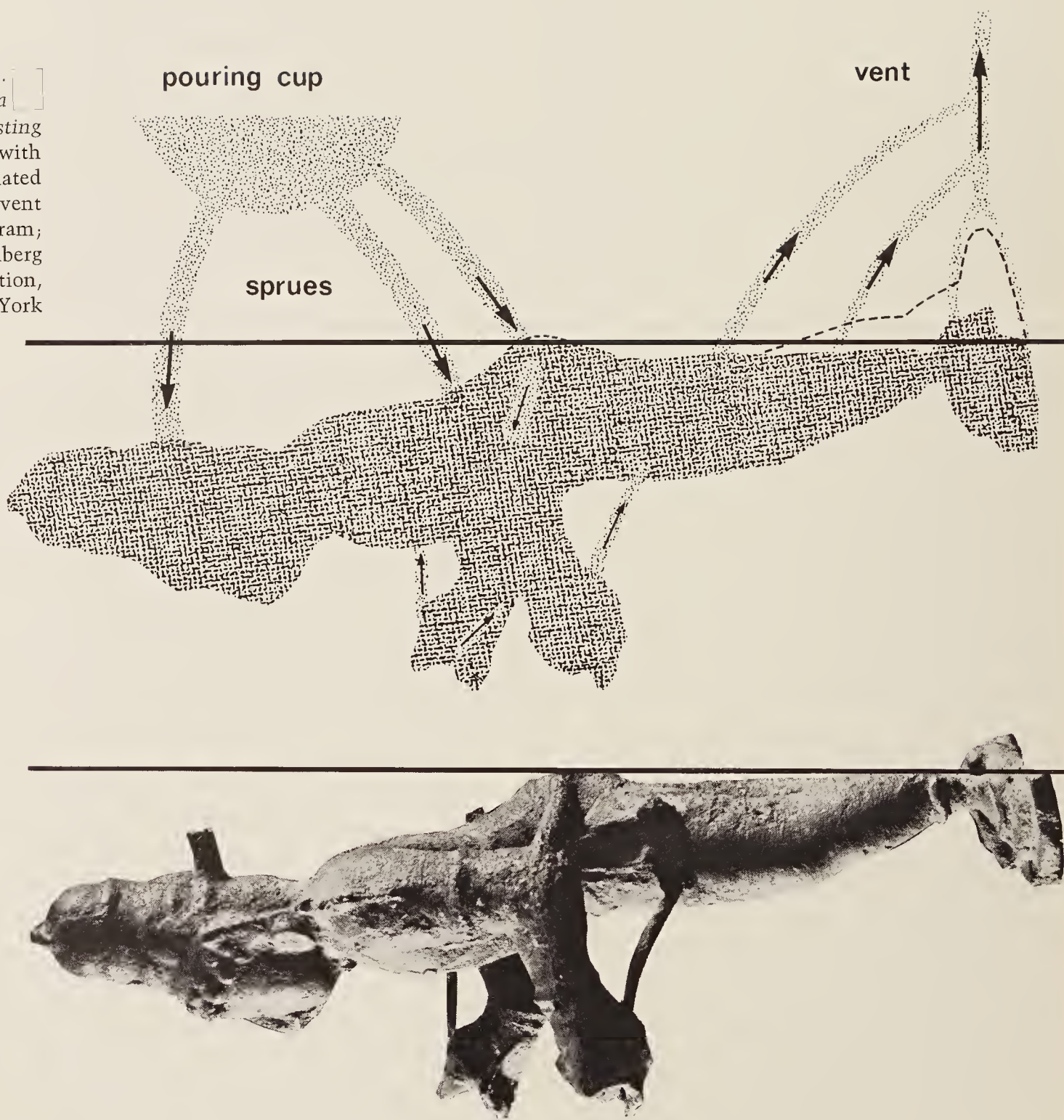
19.
Bāla-Krishna,
Bronze,
Tamilnadu,
11th-12th century;
11 3/8" h.
(39.1 cm.);
Samuel Eilenberg
Collection, New York



20.
Detail of
Bāla-Krishna
showing mold
join mark;
Samuel Eilenberg
Collection, New York

21.
Detail of Rukmiṇī
showing mold
junction on the
right side
and hip;
Los Angeles
Rājamannār Group

22. *Bāla-Krishna*
 shown in casting
 position with
 postulated
 sprue-vent
 diagram;
 Samuel Eilenberg
 Collection,
 New York



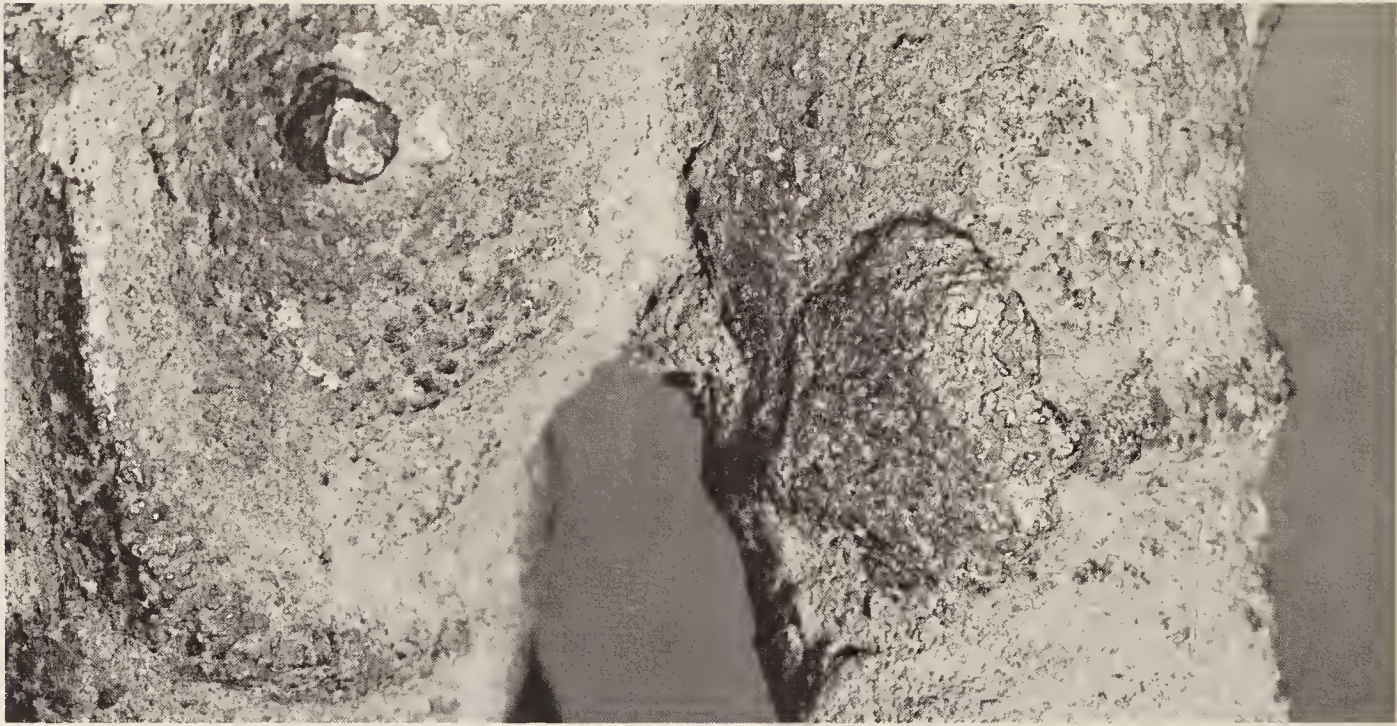


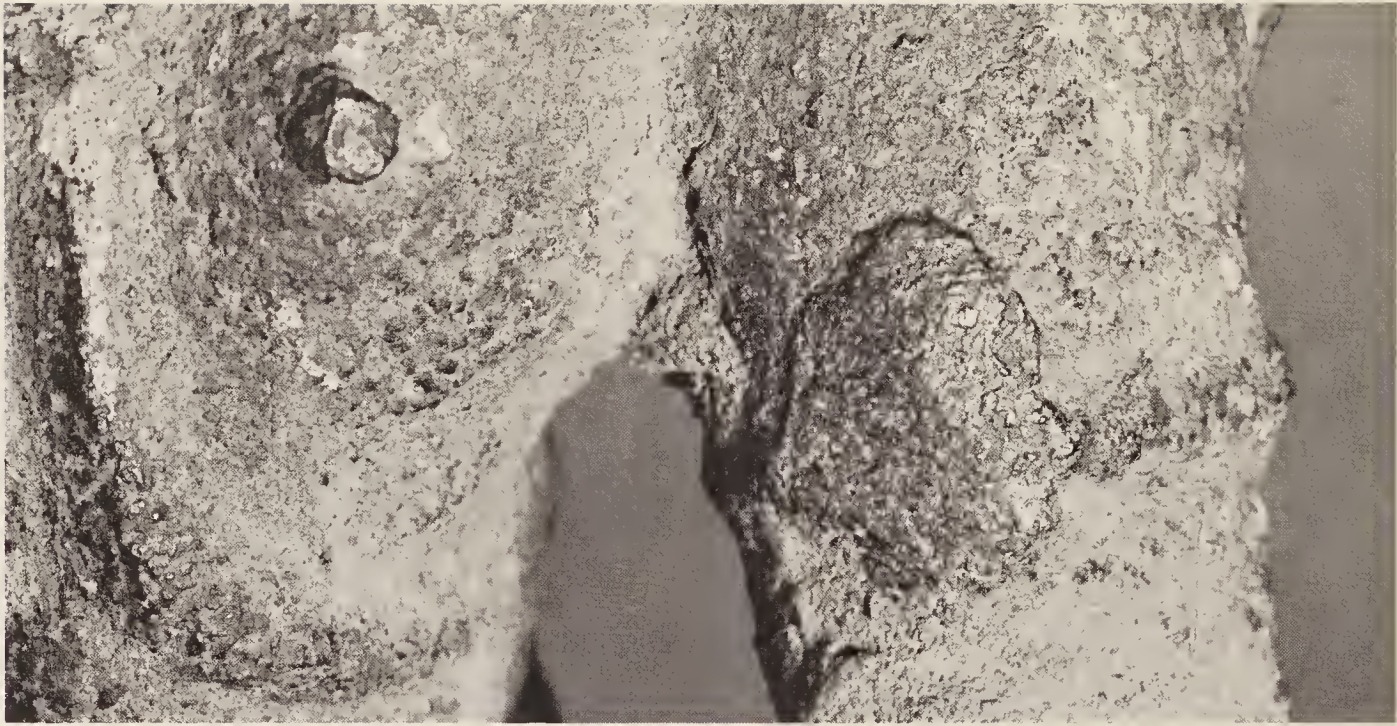
23.
Rear view of
Bāla-Krishna
showing sprues
behind head
and in
lumbar region;
Samuel Eilenberg
Collection,
New York


24.
Detail of
Krishna showing
file marks
on ear lobe;
Los Angeles
Rājamannār
Group




25.
Detail of
Krishna showing
chisel marks;
Los Angeles
Rājamannār Group

26. 
Detail of
Bāla-Krishna
showing bicep
area;
Samuel Eilenberg
Collection,
New York



27. 
Detail of
Satyabhāmā showing
coldworking
in bicep area;
Los Angeles
Rājamannār Group



28. 
Detail of
underside of
Rukmiṇī showing
lugs with
figure base
resting on them;
Los Angeles
Rājamannār Group





29.
Detail of
Satyabhāmā showing
flanges peened
over to
hold figure
onto base;
Los Angeles
Rājamannār
Group



30.
Detail of
Garuḍa showing
attachment
of the
śiraścakra by
force
fitting-peening
technique;
Los Angeles
Rājamannār Group

31.
Satyabhāmā
before cleaning;
Los Angeles
Rājamannār Group





32.
Satyabhāmā
after cleaning;
Los Angeles
Rājamannār Group

TABLE I

KRISHNA (Accession No. M70.69.1)

Height: 34" (86.4 cm.)

Base: 10" diameter (25.4 cm.)

Weight: 125 lbs.*

SPARK SOURCE MASS SPECTROGRAPHIC ANALYSIS

SAMPLE LOCATION	HIP	NECK	HEEL	AVERAGE	BASE
Cu	94.1 %	93.8 %	93.9 %	93.9 %	95.27 %
Sn	2.42	2.75	3.71	2.96	2.09
Pb	2.81	2.31	1.64	2.25	1.92
Bi	.010	.013	.04	.02	.019
Sb	.092	.098	.09	.09	.064
Ag	.05	.06	.07	.06	.05
As	.09	.14	.09	.10	.08
Zn	.11	.33	.20	.21	.17
Ni	.04	.07	.04	.05	.04
Co	.02	.02	.02	.02	.02
Fe	.20	.31	.17	.23	.27
TOTAL	99.94	99.90	99.97	99.89	99.99

TABLE II

RUKMIṆĪ (Accession No. M70.69.2)

Height: 27" (68.6 cm.)

Base: 8½" diameter (21.6 cm.)

Weight: 58 lbs.

SPARK SOURCE MASS SPECTROGRAPHIC ANALYSIS

SAMPLE LOCATION	HIP	NECK	LEG	AVERAGE	BASE
Cu	91.8 %	88.76 %	88.39 %	89.65 %	88.6 %
Sn	3.40	3.46	4.30	3.72	4.89
Pb	3.42	6.15	5.78	5.11	5.72
Bi	.06	.08	.07	.07	.03
Sb	.09	.13	.14	.12	.08
Ag	.07	.10	.11	.09	.07
As	.08	.08	.10	.086	.09
Zn	.23	.36	.20	.26	.14
Ni	.60	.65	.70	.65	.10
Co	.03	.04	.03	.03	.04
Fe	.20	.19	.18	.19	.20
TOTAL	99.98	100.00	100.00	99.97	99.96

*Note that the relative weights of the figures are in a rough ratio of 1 (Krishna) to ½ (Satyabhāmā, Rukmiṇī) to ¼ (Garuḍa). Even though Rukmiṇī is one inch shorter than Satyabhāmā her weight is precisely the same.

TABLE III

SATYABHĀMĀ (Accession No. M70.69.3)

Height: 28" (71.1 cm.)

Base: 8½" diameter (21.6 cm.)

Weight: 58 lbs.

SPARK SOURCE MASS SPECTROGRAPHIC ANALYSIS

SAMPLE LOCATION	HIP	NECK	LEG	AVERAGE	BASE
Cu	93.05 %	92.65 %	92.45 %	92.71 %	93.31 %
Sn	2.25	2.21	2.66	2.37	1.62
Pb	3.50	3.96	3.53	3.66	4.33
Bi	.01	.01	.04	.02	.03
Sb	.09	.09	.13	.10	.09
Ag	.08	.08	.11	.09	.09
As	.022	.026	.04	.02	.032
Zn	.08	.11	.09	.09	.05
Ni	.50	.45	.55	.65	.40
Co	.020	.02	.02	.02	.01
Fe	.39	.39	.38	.39	.03
TOTAL	99.99	99.99	100.00	100.00	99.99

TABLE IV

GARUDA (Accession No. M70.69.4)

Height: 20" (50.8 cm.)

Base: 7" diameter (17.8 cm.)

Weight: 27 lbs.

SPARK SOURCE MASS SPECTROGRAPHIC ANALYSIS

SAMPLE LOCATION	HIP	NECK	HEEL	AVERAGE	BASE
Cu	95.8 %	93.8 %	93.8 %	94.46 %	93.9 %
Sn	2.24	3.2	3.7	3.04	2.2
Pb	1.5	2.4	1.9	1.9	3.2
Bi	.05	.08	.06	.06	.04
Sb	.05	.08	.10	.07	.10
Ag	.05	.12	.05	.07	.05
As	.06	.05	.07	.06	.05
Zn	.11	.11	.10	.11	.20
Ni	.02	.03	.04	.03	.06
Co	.02	.02	.02	.02	.07
Fe	.07	.07	.10	.08	.10
TOTAL	99.97	99.96	99.94	99.90	99.97

TABLE V

COMPARISON OF ELEMENTAL ANALYSES

	BODY AVERAGE				BASE			
	KRISHNA	SATYABHĀMĀ	RUKMIṆĪ	GARUḌA	KRISHNA	SATYABHĀMĀ	RUKMIṆĪ	GARUḌA
Cu	93.9 %	92.71 %	89.65 %	94.46 %	95.27 %	93.31 %	88.6 %	93.9 %
Sn	2.96	2.37	3.72	3.04	2.09	1.62	4.89	2.2
Pb	2.25	3.66	5.11	1.90	1.92	4.33	5.72	3.2
Bi	.02	.02	.07	.06	.019	.03	.03	.04
Sb	.09	.10	.12	.07	.064	.09	.08	.10
Ag	.06	.09	.09	.07	.05	.09	.07	.05
As	.10	.02	.09	.06	.08	.03	.09	.05
Zn	.21	.09	.26	.11	.17	.05	.14	.20
Ni	.05	.65	.65	.03	.04	.40	.10	.06
Co	.02	.02	.03	.02	.02	.01	.04	.07
Fe	.23	.39	.19	.08	.27	.03	.20	.10

One of the mysteries thus far encountered is the crude craftsmanship of the bases relative to the masterful work on the figures (note the crude incisions of the lotus petals in the two base elements). The combined force fitting-peening technique is utilized to attach the *śiraścakra*. A hole in its center is fitted over the main sprue bolt, and the outer rim of the sprue bolt is pounded over to hold the *śiraścakra* in place (Fig. 30).

CHEMICAL COMPOSITION

Each piece was analysed for the composition of its metal. Four samples were taken from each piece⁶ (base, feet area, waist area, and neck area) except for Garuḍa, from which only two were taken (base and back). The analysis was carried out by using an AEI MS702 Spark Source Mass Spectrometer, which actually gives thirteen analyses from a single sample electrode as a result of the thirteen exposures necessary to cover the dynamic range of 1 to 10⁶ resulting in trace analyses detectable to one part per million (ppm) or less.⁷ The results are recorded here in Tables I-V. Table V gives the average of the three body analysis of Krishna, Satyabhāmā, and Rukmiṇī for convenience in comparison of constituents.

A study of the analysis shows that the copper-tin-lead components account for more than 98% of the metal. This is a higher percentage than the average found in Chinese or Greek bronzes. It is also

noteworthy that the tin-lead ratio in the body averages (Table V) shows two pieces with more lead than tin. Rukmiṇī is exceptional in that the combined tin-lead is higher (8.83%) than in any of the other pieces. This is noticeable in the coloration of the piece which is greyish when compared with the other three. It is also noteworthy that the base in all the pieces except Krishna has a greater content of lead in proportion to tin. This may have aided in the peening of the base onto the figure; the increased lead would make the alloy more workable.

The trace elements shown in the tables were the only ones detected. The consistency in occurrence of these elements, as well as the comparable quantities in the four pieces, indicate that the ores smelted for the major constituents in the various pieces were obtained from the same source. The arsenic, which is present in all places, does not occur in great enough quantity to indicate an arsenical-copper.⁸ The presence of silver in trace quantities probably relates to galena, the lead sulphide mineral which was undoubtedly the major source of lead.

TREATMENT

The surface accretion of compacted dirt and resinous inclusions was removed mechanically using small scalpels, needles, and stiff brushes. In some areas the boundary line between the surface accretion and

the patina was so ill-defined that all the dirt could not be removed safely. In other areas a loose upper layer of greenish patina was so enmeshed in the dirt layer that cleaning meant removal of a small amount of the uppermost green layer. This was done only in areas where there was a sufficiently thick green patination to permit removal of the dirt while still leaving a richly patinated green surface. In cleaning the bases which had heavier encrustations, the ultrasonic cleaning tank was used to loosen the accretion before removal with scalpels and brushes.

After cleaning, the bronzes were given a very thin coating of Acryloid B-72 (approximately 3% in toluene) to prevent discoloration from dirt accumulation and to help retard deterioration of the surface due to sulphides and handling.

Three losses were so disfiguring as to require filling. These were the gash on Satyabhāmā's abdomen, the loss in Krishna's neckband, and that on his stomach.⁹ These losses were filled with beeswax-multiwax mixed with terre verte as pigment. After filling and leveling, the areas were toned to match the patina color using acrylic paints (Figs. 31, 32, cover, and frontispiece).

CONCLUSIONS

A lack of published data on south Indian bronzes has precluded a more thorough comparison with similar bronzes. To date very little information has come forth either in casting technology or chemical composition of Indian metals. These four magnificent bronzes, along with the study piece, provide an insight into the level of metallurgical expertise of both artists and foundrymen. The essential features we have been able to discern are large solid castings, piece molds, a high copper-lead-tin percentage in the metal composition, extensive coldworking, simple peening, and peening-force fitting joining techniques.

Because of time limitations I was not able to pursue the examination as far as I would have liked. For example, metallurgical sections combined

with more analysis and further study of patination would surely provide further insights into the technology of the bronzes. Similarly, a study of the minerological resources in India would be valuable in interpreting the trace analysis.

NOTES

1. The resinous crystals were identified using a gas chromatographic technique combined with Mass Spectrometry. They are undoubtedly a crude damar resin. Another group of south Indian bronzes belonging to the Los Angeles County Museum of Art has been examined at the Conservation Center and exhibits the same phenomena, except in greater quantity. A tentative explanation for the presence of the resin on the bronzes is that airborne particulants of resinous material resulted from routine burning of resins in shrines over long periods of time. The quantities of resin involved were so large and in such proximity to the sculpture that they may well have been deposited on the surfaces of large metallic objects in considerable quantity.
2. This figure was generously lent to the Conservation Center for study purposes by Dr. Samuel Eilenberg, who purchased it from a dealer in Paris. It is very unusual to have a miscast, since the metal would ordinarily have been melted for reuse. The composition of the metal adds validity to my comparison with the Los Angeles bronze group since its elemental analysis is so close. An article devoted entirely to the miscast study figure is to be published in the near future.
3. Both X-radiographs and neutron radiographs were attempted to detect the presence of an armature or core. Neither was detected, nor was gross segregation of the lead apparent in the X-rays.
4. For terminology of bronze casting, etc., see Arthur Steinberg, "Techniques of Working

- Bronze," *Master Bronzes from the Classical World*, Boston: Fogg Art Museum, 1967, pp. 9-15.
5. See Rutherford J. Gettens, etc., *The Freer Chinese Bronzes*, Vol. II, Washington, D.C.: Smithsonian Institution, 1969, p. 69, Fig. 41.
 6. Drill—size No. 53 (1.512 mm. diameter) vanadium bright finish (Avildsen Tools and Machines Inc.), Style 350SM; depth of drilling—1-1.5 cm., first two mm. discarded; nature of drilling—metal twists taken with Foredom Micro-variable Speed Drill.
 7. Generally accepted today in Mass Spectrography is a standard deviation of 10%-15% in the region of 1-1000 ppm. The accuracy increases to about 3-4% for minor and major constituents. See Ahearn, Cairns, and Vossen.
 8. It has been noted by Dr. B. B. Lal in "An Examination of Some Metal Images From Nalanda," *Ancient India*, No. 12, Vol. 19, p. 57, that Nalanda bronzes do not contain appreciable amounts of arsenic.
 9. The gash on Satyabhama's stomach and the gash on Krishna's stomach appear to result from shovel blows during excavation of the pieces; the loss in Krishna's neck decoration is probably an early damage.
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Figures 9, 11

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